The Health Magazine of the American Medical Association

hygeia

NOV 2 1945

DECEMBER
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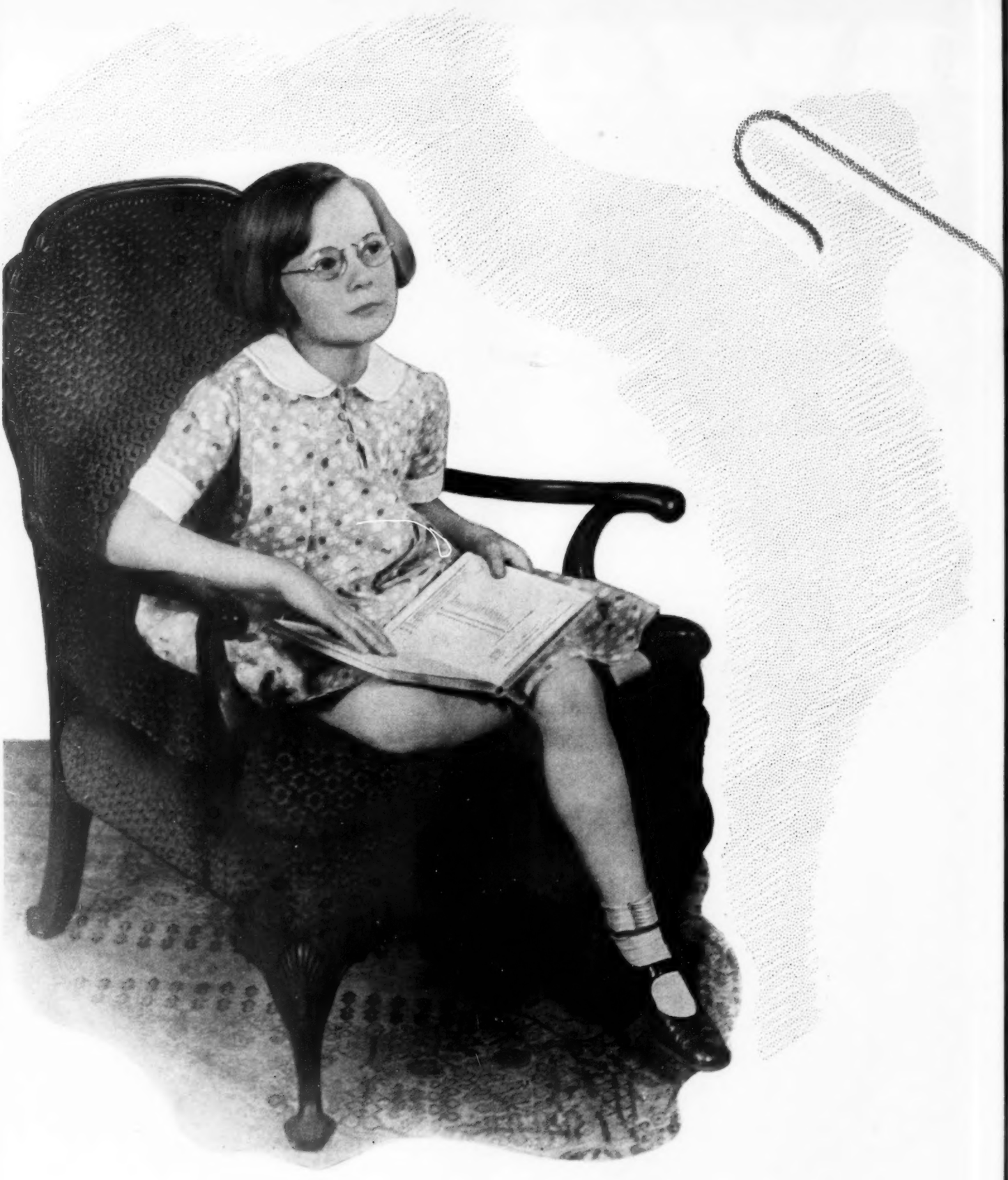
HOW TO BUY TOYS

By Lois K. Ide



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"BABIES SUPERVISED BY

GLASSES

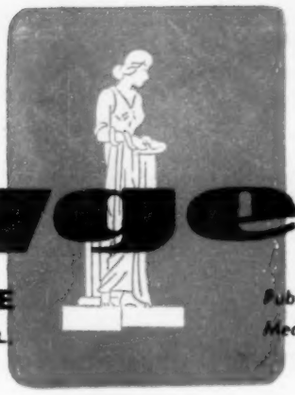
I'm a little girl with glasses on.
At first it made me sad,
But father told me something
That has made me truly glad.

HE says when a girl wears glasses
It shows that someone cares,
And that if there is trouble
That trouble someone shares.

SOME eyes, you know, are not made right
And lenses make them better.
They make it so you plainly see
Each tiny word and letter.

SO any child with glasses on
Has one who loves him dearly
Since my father told me that
I wear my glasses cheerily.

—*LOIS E. DANN*



hygeia

THE HEALTH MAGAZINE
535 N. DEARBORN ST., CHICAGO 10, ILL.

Published and copyrighted, 1945, by the American Medical Association. Edited by Morris Fishbein, M.D.

DECEMBER

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HYGEIA, The Health Magazine, is published monthly by the American Medical Association, 535 N. Dearborn Street, Chicago 10, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Single copies, 25 cents. Volume 23, Number 12. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923. Printed in U. S. A.

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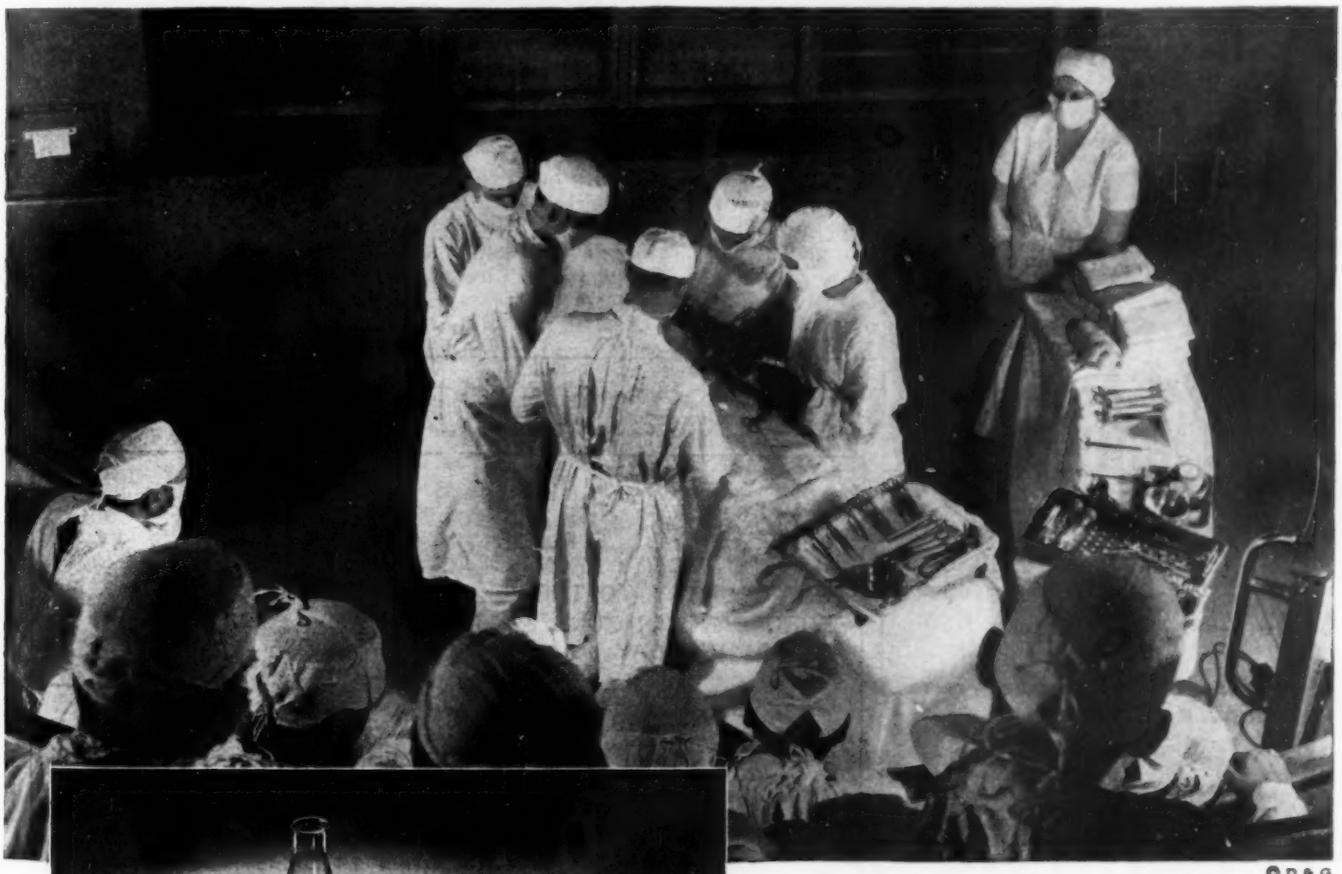
LONG OPERATIONS MADE SAFER

A remarkable drug is giving surgeons help they never had a few years ago. Through its use, much risk is taken out of operations, and the patient has a smoother, faster recovery. This is especially true in abdominal surgery that so often requires a long operation.

The drug is *curare*. Used along with general anesthesia, and by a skilled anesthetist, curare produces a temporary but complete muscular relaxation. This effect is one of the greatest aids a surgeon can have. Ordinarily, under general anesthesia, muscles are likely to remain tense, resisting the surgeon's skilled hands. Curare softens up that resistance.

Striking examples of curare's value are being seen in battle-front hospitals, where multiple wounds may require over four hours of repair, even with two surgical teams operating. The use of curare—by permitting a lighter plane of anesthesia—avoids shock that tends to cause death. Lives of wounded men have been saved by this drug.

Research at the Squibb Laboratories developed the method of producing a reliable extract of curare for medical use. In 1939 for the first time a standardized, purified curare (Intocostrin) was made available to physicians by Squibb... another contribution by Squibb scientists to the health and safety of people everywhere.



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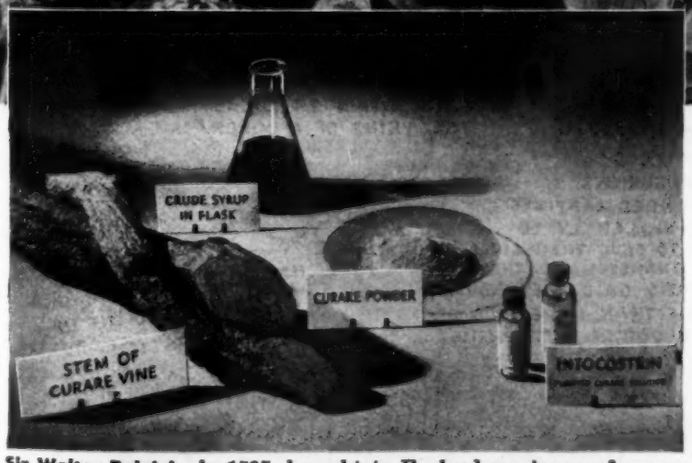
First use of curare (Intocostrin) in anesthesia took place in Montreal in 1942. Now, for example, one anesthetist alone has reported over 1000 administrations, all succesaful. Curare's helpful effect occurs within about two minutes. At critical moments in an operation, when complete relaxation is needed in the patient, surgeons and anesthetists now have a drug at hand that will give relaxation uniformly, quickly, and harmlessly.



Sir Walter Raleigh, in 1595, brought to England specimens of curare that he obtained from the Orinoco Indians of South America. For centuries it was a mystery drug, although its fundamental physiologic action became well known. However, not until Squibb scientists had provided a standardized and purified curare in the form of Intocostrin was its general medical use made possible.

SQUIBB

A name you can trust

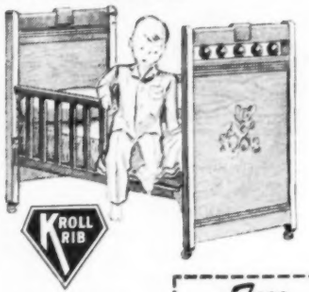
-EVEN WHEN I'M A BIG BOY

—I'LL STILL BE USING MY KROLL 3-in-1 Safety KRIB!

When I WAS A BABY, MOMMY USED IT AS MY BASSINETTE AND DRESSING TABLE, WITHOUT STOOPING.

Now THE SPRING HAS BEEN LOWERED SO I CAN'T FALL OUT. AND SEE HOW THE SPRING *T-I-L-T-S!*

Later, MOMMY WILL MAKE MY CRIB INTO A JR. YOUTH BED!



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JUVENILE FURNITURE *and* BABY CARRIAGES

WHO'S WHO IN HYGEIA

Major General GEORGE C. DUNHAM (you will find his biography in the March 1945 issue of HYGEIA) was recently awarded the Distinguished Service Medal for his work in advancing the development of Latin America. The citation accompanying the medal reads in part: "Through his exceptional performance in discharging duties of great responsibility, large populations in the other Americas have benefited from expanded health and sanitation facilities, standards of living have been raised, and important forward steps have been taken in cooperative effort toward the economic development of the hemisphere." We can't add to that, except to say that "large populations in the other Americas" have undoubtedly benefited from the attack on malaria described in General Dunham's article which begins on page 902.

DOROTHY S. TOWLE, who is a native Texan, received her bachelor's degree from the University of Texas, and her master's from Yale University—subject, history. Mrs. Towle and her husband, professor of English at the University of New Hampshire, have two daughters 10 and 12 years of age. She is at present assistant extension editor at the University of New Hampshire, a job which is technically part of the emergency food work of the Department of Agriculture. Her work consists of doing agricultural and home economics publicity for the university. Formerly Mrs. Towle was managing editor, then co-editor of *American Cookery Magazine*. "A New Design for Living," her article in this month's HYGEIA, begins on page 912.

JUSTUS J. SCHIFFERES was secretary of the National Committee on School Health Policies, which met in New York recently to revise the new charter for school health shortly to be published as *Suggested School Health Policies*. Born in St. Paul, Mr. Schifferes received his B.A. degree from Yale in 1929 and has since taken postgraduate work in comparative literature, history of science and health education at the University of Minnesota and at Columbia. Mr. Schifferes heads the Science Publications Council in New York, and this spring his name appeared prominently as co-editor of *The Autobiography of Science*, a new kind of science history. You will find his school health education article beginning on page 918.

MEDICAL MISCELLANY by Peirce

NEARLY TWO TONS OF FRESH WHOLE BLOOD WERE FLOWN DAILY FROM THIS COUNTRY TO THE EUROPEAN WAR ZONE BEFORE V-E DAY

PACKED IN QUART BOTTLES CONTAINING SPECIAL PRESERVATIVES, THIS BLOOD WAS FREQUENTLY ADMINISTERED TO WOUNDED G.I.'S WITHIN 24 HOURS AFTER LEAVING THE VEINS OF A DONOR!

Speaking OF BLOOD TRANS FUSIONS SOME WOUNDED CAPTIVES OBJECTED VIOLENTLY TO ATTEMPTS TO SAVE THEIR LIVES BY BLOOD TRANSFUSIONS. THESE FRANTIC NAZIS SAID THEY WOULD RATHER DIE THAN HAVE NON-GERMAN BLOOD IN THEIR VEINS!

PENICILLIN HAS BEEN SUGGESTED AS A FUTURE INGREDIENT OF LIPSTICK

THE MAN WHO BROKE THE LAW – *of nature!*

This man is guilty – of neglecting his eyes.

As usual, *crime does not pay!* His neglected vision, his straining eyes, hold him back from normal enjoyment of life just as surely as would iron bars and prison walls.

But there's a key to the lock of *this* prison: *periodic, professional eye care.*

When were *your* eyes examined last?

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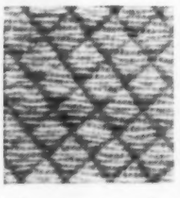
HAPPY babies are comfortable babies — and comfort comes from CHIX Down-Weve Gauze diapers! Different, because they combine the advantages of surgical gauze with bird's-eye weave — making a diaper that's light, soft, and very absorbent.

THE special weave makes diaper laundry as easy as pie—"soil" rinses out quickly and thoroughly. CHIX dry in a jiffy . . . soft as a feather and clean-smelling.

DAY and night, CHIX give baby complete protection. The weave holds moisture — keeping baby's other clothes drier and cutting down laundry. Economical — one size fits the growing baby. For special occasions try CHUX, the completely disposable diaper, or DISPOSIES, disposable inserts used with waterproof holders. All made by Chicopee, makers of CHIX.

Chix
DOWN-WEVE GAUZE
DIAPERS



CHICOPEE PRODUCT

Close-up of bird's-eye weave that makes CHIX Down-Weve Gauze Diapers so different—soft, light, absorbent. Made of the same fine cotton that is used for surgical gauze.

Chicopee Sales Corp., 47 Worth St., N.Y. 13, N.Y.

LETTERS FROM READERS

He's Coming Back Later

To the Editor:

Since noting articles in your magazine to the effect that men developed from a lower animal life, I have been greatly encouraged. Prior to that time I was somewhat pessimistic and cynical; the idea that men are presumably civilized and can yet do the unprofitable things in which they indulge, was discouraging! But, since in a jillion years they have come forward from that lower animal life to what they now are, I've oriented myself and acquired a better balanced outlook on how little one has a right to expect in only one lifetime; I'm now hoping that some reincarnation may send me back in a thousand years to see if noticeable progress has been made. Yours for progress.

F. G. SWANSON

Tyler, Tex.

Longevity

To the Editor:

I was glad to see a report in HYGEIA for August on Dr. Louis I. Dublin's work, drawing attention to the fact that although the average expectation of life at birth has increased, that there has been little or no increase in expectation of life after 40. This misconception is so common that most adults take it for granted that they are going to "live longer."

The increase in the average length of life was attributed in the discussion to certain factors such as "better housing, food, education, working conditions and medical care." No explanation was given as to why these improvements should cease to cause increase in life after 40, when they still operate. Would a better explanation lie in attributing the increased average life expectancy to reduction in mortality of infants and children due to control of childhood communicable disease, an explanation which I have seen elsewhere?

It is fine that you are bringing this problem of attaining the normal human life span of 100 years to the attention of the American people. When the profession and the public together really get busy on it, they may find that it not only can be attained, as the decrease in child mortality was attained, but that the individual may be well and functioning, not "aged," while living to that age.

HELEN A. BINZ

Mineola, N. Y.

Hen-Egg Problem, Publishing Version

To the Editor:

I am old subscriber to HYGEIA which I consider a really first class magazine, and for some time I have wanted to point out to you what I consider the only fault it has. I find it very trying when I am in the middle of an interesting article to have to turn to page 72 for the end of it. It interrupts my train of thought and is a nuisance. I never read magazines like the *Saturday Evening Post, Life,* etc., for that reason, as the articles are seldom interesting enough to me to warrant my looking for the remainder on some page at the end. HYGEIA is the only magazine I find interesting enough to go to the trouble of looking for what comes after the first two pages. Of course I know that the reason for such a set-up is to please the advertisers. I also realize that without advertisers a magazine such as HYGEIA cannot exist. My point is that readers should also be given some consideration, for they are, in my view, quite as important as advertisers. Without subscribers there would not be any advertisers, either.

WALTER LIND

Guatalon, Guatemala

Very Best

To the Editor:

I consider HYGEIA the very best magazine on the market, and when my two-year subscription runs out I intend to renew it immediately. I can hardly wait to read the interesting and educational features which appear each month. I have saved each copy for the past five years, and have quite a stack. Each issue contains something interesting and vital. Since I have recently become a mother, I look forward, naturally, to more articles on baby care. Keep HYGEIA rollin'!

MRS E. M. LAMPROPOULOS

Batavia, N. Y.

At WHAT AGE can a hearing aid bring most help to a child?

Parents of J . . . H . . .,* above, made every effort to discover why she seemed "slow" and could learn to speak only a few words in spite of help at home and in nursery schools. Then, when she was 4½ years old, examination by a skilled otologist revealed a serious hearing impairment. Under his direction, she was experimentally enrolled in public school, and a few months later received her first hearing aid. Helped also by special lip-reading instruction, she learned rapidly, scored an I.Q. rating close to the highest in her class, and upon entering the third grade her reading interpretation was equal to fifth grade standards. Her delight at her progress is shared by her parents and otologist, who continues his advice and help.

**Name omitted in accordance with medical principles.*

When a Sonotone Consultant makes an audiometric examination of hearing, the only medical advice he gives is, "Be sure to see your doctor." The audiometer accurately measures the extent of hearing loss across the tone range, and is invaluable in providing the closest fitting of a Sonotone to individual needs, for best possible hearing, if the doctor has advised use of a hearing aid.

OFTEN an otologist's care at an early age will prevent permanent hearing loss and the need for a hearing aid. Likewise, many investigators agree that once a hearing aid is found medically advisable, the greatest benefits will result from its immediate adoption.

Obviously a child of 3 or 4 years could not ordinarily be trusted to wear, constantly, a hearing aid representing a considerable investment. But even at this early age, part-time use of the aid within the home would help prevent interruption of normal learning progress.

The risk of delay lies primarily in the fact that a child who cannot hear properly is cut off from many of the experiences and lessons of others of his age, and may easily become shy and fearful of human contacts. Such children often appear dull—when poor hearing is their only defect.

There is also the risk that the *meaning of sounds* may be quickly forgotten. Even an adult has difficulty in distinguishing again among words and other sounds after a few months of not hearing. When a young child must wait too long for a hearing aid, progress and natural ease in its use is made much more difficult.

So many children have grown up with hearing losses unrecognized and unremedied that many States are now moving toward regular hearing examinations and clinical care in the public schools. Audiometric examinations, used by many school systems and individual otologists, measure accurately the extent of hearing loss. If you have any questions about your child's hearing, a doctor's examination, advice and care *now* may avoid an adult disability.

SONOTONE

ELMSFORD, NEW YORK

A personal service that seeks to give you BETTER HEARING

Diabetes usually permits normal living, though insulin injections are generally needed. When the pancreas stops producing adequate insulin, diabetes starts. Cells of the pancreas, located behind the stomach, normally manufacture the insulin the body needs to store and burn sugar.

If you're plump and middle-aged . . .

. . . **watch for diabetes!** Be on the lookout for these signs:

1. **Constant hunger** and loss of weight, despite overeating, because your body can't make use of the food you eat.

2. **Continuous, or aggravated thirst.** Because the kidneys are working overtime to dispose of excess sugar, you try to replace the water lost.

3. **Weariness and irritability.** Because your body is unable to make proper use of food and water, it tires faster. Boils and carbuncles are often an indication of diabetes, particularly in older people.

These three conditions are indications of well-established diabetes, but are often absent in early or mild cases. Accordingly, it is important for everyone with a family history of diabetes—all the more if overweight—to have an annual physical examination, including urinalysis.

If you are diabetic, your faithful, intelligent co-operation with a physician will enable him to control the disease through *diet, exercise* and *insulin.*

While injections of insulin won't *cure* diabetes—as yet there is *no* known cure—they will supply this vital substance and thus enable you to lead a practically normal life.

To learn more about diabetes and its treatment, send for Metropolitan's free booklet, 125-Z, entitled: "Diabetes."

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CHEST X-RAYS ON THE RUN

Second Base Air Depot, Blackpool, England—American medical officers in Great Britain are now x-raying the chest cavities of our soldiers awaiting reassignment at an expenditure of only a penny-and-a-half a pair of lungs! This phenomenally low cost of mass radiography has been made possible with equipment built at an Air Service Command depot in England under the supervision of Capt. William T. Bennie, former Cleveland physician now serving at the only Air Force station hospital in the United Kingdom.

With no plans or working drawings to guide them, Captain Bennie and the soldier-technicians built an x-ray trailer unit that has proved

its practicability and resulted in a request for another unit. The trial and error method of construction called forth all their powers of improvisation and ingenuity and produced many innovations. Since British power lines transmit electricity which differs in voltage and cycle from that used with American electrical equipment, a three-ton gasoline engine was installed to generate the desired type of juice. When the engine was operating, its vibrations made it impossible to film any one. To eliminate this kink, Captain Bennie had a steel bed made with eighty evenly-spaced drilled holes. Into each of these holes went a salvaged aircraft engine cylinder valve spring. The generator and its mounting now rest on these springs, which absorb the vibrations and help stabilize the trailer while the powerful engine is turning over.

A complete dark room was built inside the unit, and it contains a portable x-ray developing outfit. Metal water tanks bolted to the ceiling have a 132-gallon capacity and, with a faucet control sink, radiograph technicians are assured of a running water supply sufficient for their needs. To forestall possible damage to the equipment and accessories in transit, Captain Bennie had all x-ray installations made from the floor up.

To permit the greatest number of men to be x-rayed in the least possible time without any hold-ups in the line, two doorways were cut in the trailer. A soldier strips in the canopy tent, walks up a set of stairs through one door, is filmed, and walks out the other door and down another set of stairs. Captain Bennie has succeeded in filming more than 1,000 men during an eight hour experimental run.

TWO WOMEN WITH CANCER

One Was Wise

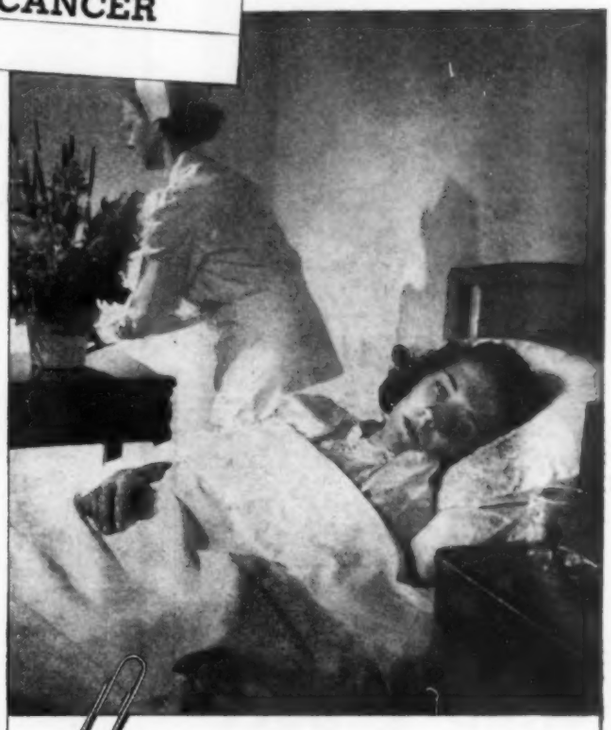
Mrs. A. M.: Noticed small lump in breast.

Decided to take no chances. Consulted doctor right away.

Doctor diagnosed tumor of the breast. Advised prompt operation.

Small growth, which proved to be cancerous, successfully removed.

No complications. Patient recovered completely.



One Was Foolish

Mrs. B. L.: Noticed small lump in breast.

Decided it wasn't anything worth bothering about.

Lump steadily increased in size. Pain developed in breast, underarm.

Finally consulted doctor. Doctor diagnosed cancer.

Operation showed nothing could be done as disease had spread too far.

MILLIONS of dollars are put into cancer research each year . . .

Still cancer ranks second only to heart disease as a destroyer of human life.

The most important thing in cancer control is *early* diagnosis. To be followed, of course, by *early* treatment.

The doctor should be consulted at the first sign of anything suspicious. Most cancers, if only caught soon enough, can be cured.

Failure to pay attention to the danger signals can result in serious trouble.

SEE YOUR DOCTOR

PHARMACEUTICALS • BIOLOGICALS
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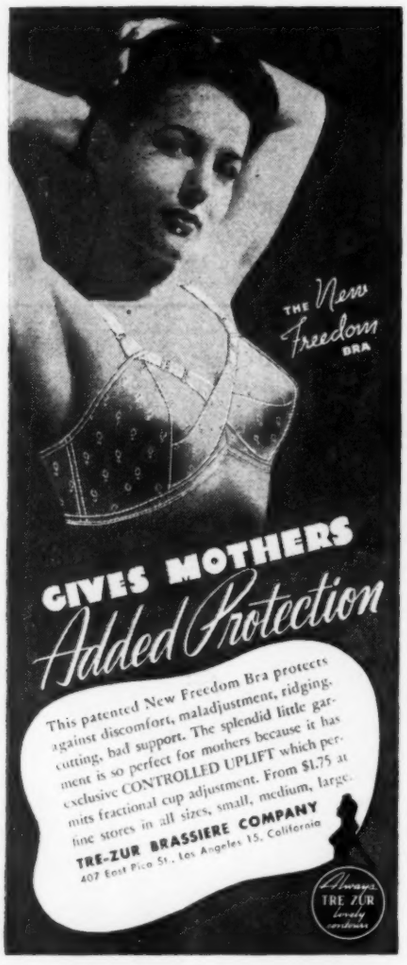
Advertisement No. 192 *in a Parke, Davis & Co. series on the importance of prompt and proper medical care.*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This patented New Freedom Bra protects against discomfort, maladjustment, ridging, cutting, bad support. The splendid little garment is so perfect for mothers because it has exclusive CONTROLLED UPLIFT which permits fractional cup adjustment. From $1.75 at fine stores in all sizes, small, medium, large.
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YOUR NERVES

by
Arnold S. Jackson,
M.D., F.A.C.S.
JACKSON CLINIC
Madison, Wisconsin

Answers Those Questions About "Nerves"

Gives those facts about "nerve" complaints your own doctor would undoubtedly give if he had the time and opportunity. Simple language. Entertaining style. Good for the entire family.

CHAPTER HEADINGS

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- Miracles, Malingerers and Mollycoddles
- Tight Necks, Choking Sensation, and Shortness of Breath
- Supermen
- Nerves in the Nursery
- Nervousness Due to Goiter
- She Wanted Attention
- Change of Life for the Better
- Balanced Living
- Religion and Nerves
- Conclusions

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Coming in HYGEIA!

BABY COMES FIRST—OR DOES HE?

By Sarah Ward Gould

Many women have found it impossible to be a good wife and a good mother at the same time, and, as a result, unnecessary divorces have occurred. The reasons for this unfortunate situation are pointed out by Mrs. Gould, along with some suggestions on how to avoid it.

HEART DISEASE AND WHAT TO DO ABOUT IT

By J. H. Irvine, M.D.

Our readers always seem to want more and more about heart disease, and they're sure to be interested in Dr. Irvine's article, which is full of practical information.

ARE YOU A HAUNTED MOTHER?

By Bernard Hirshberg

Mr. Hirshberg's quiz technic has the advantage of stating a problem concisely, and suggesting an answer briefly and emphatically. Here will be found solutions to a number of the home worries which haunt many a mother.

CANCER OF THE RECTUM

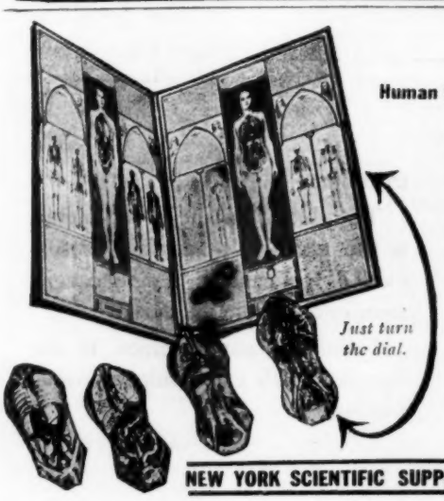
By Rudolph V. Gorsch, M.D.

Symptoms, treatment and cure of rectal cancer are discussed by a well-known New York proctologist in the article which will appear in our January issue.

FEEDING AND TOILET TRAINING

By Elisabeth R. Geleerd, M.D.

Dr. Geleerd, approaching her subject from the psychiatric point of view, has written for HYGEIA an article which all mothers are sure to find valuable. She stresses particularly the effects on the child's personality of mothering, feeding, weaning, and rigid toilet training.



BODYSCOPE

Human Body Structure in Review at the Turn of a Dial

KNOWING your body tends to make you more conscious of health conservation.

BODYSCOPE is a comprehensive panorama of the human structure, 20" x 32" in size, with 80 colored plates, and 20,000 words of simple description that every one can understand. At each turn of the dial a new chart with description comes into view.

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Should I take vitamins?

Painted by Margit Varga

"There's hardly a day that some patient doesn't ask that question. The answer is, 'Yes, if you need them'—and the best person to decide whether you need them is a physician. The past ten years of persistent research have established the fact that many people—from one-half to two-thirds of some groups studied—do not get enough vitamins. Effective means are now available for correcting these nutritional deficiencies. Today when a physician gives you a prescription for vitamins, you may carry out his instructions confident that his opinion is based on sound scientific facts."

Your doctor

To help avoid vitamin deficiencies—

1. *Eat fruit, vegetables, and enriched bread*—the right food will help prevent deficiencies. When meat is scarce, have eggs, fish, and milk to keep up your protein and mineral intake.

2. *The vitamin values* of well ripened fruit and fresh vegetables are reduced in unpredictable degrees in marketing and preparation. When the vitamin intake in foods is low, or when there is an extra requirement, supplemental vitamins are often needed.

3. *If illness, digestive disturbance,* or other trouble has prevented you from eating enough of the right food, or if pregnancy or being on a restricted diet has increased your vitamin needs, you may require a special supplement.

Your physician can tell you if you do need extra vitamins, and he will prescribe the proper preparation for you to take.

Upjohn
KALAMAZOO 99, MICHIGAN

FINE PHARMACEUTICALS SINCE 1886

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"YOUR DOCTOR SPEAKS"—ninth in a series sponsored by Upjohn to bring better health to more people through current medical knowledge

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● Does your skin have a tendency toward dryness and sensitivity during the winter months? Try delightfully soothing Marcelle Special Skin Lotion to discourage dry skin. It is an excellent powder base and serves as a general skin lotion, too.

Marcelle hypo-allergenic Cosmetics are formulated especially for dry, sensitive skins. Known allergens have been omitted or reduced to a minimum. Ask your physician about Marcelle Cosmetics.

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CLOTHING COLLECTION

This year the goal set by the United National Clothing Collection, Inc., is 100,000,000 garments, according to a recent bulletin from the National Committee. By Christmas approximately 25,000,000 men, women and children in the liberated countries will have received clothing donated by the American people in the clothing collection campaign of last spring. But 25,000,000 is only a small percentage of the destitute, homeless and looted people of Europe, the Philippines and the Far East. It has been estimated that in China alone 200,000,000 people need clothing. Garments now hanging unused in American closets can help clothe millions during the winter weather.

Contributors are asked to take suitable garments to collection centers in their own community, where clothing will be packaged and sent to designated warehouses for sorting and shipping. The National Committee, headed by Henry J. Kaiser, states that clothing most acceptable includes infants', children's, women's and men's coats, suits, trousers, skirts, dresses, shirts, sweaters, knitwear, underwear, pajamas and shoes, as well as galoshes and rubbers. Blankets and bedding are urgently needed, too. The committee urges contributors to write friendly letters to send along with the garments, saying that the many letters enclosed in last spring's collection were warmly received and inspired many friendly replies.

HOW TO CHOOSE FOODS

How to choose a typical day's good meals from the Basic Seven Food Groups is illustrated by a new Department of Agriculture poster. Large color reproductions of this poster are being displayed in grocery stores throughout the country to help menu-planners translate into delicious, balanced meals the government nutrition guide familiarly known as the "Basic Seven."

Beginning with a good breakfast typified by a combination of fruit, cereal, milk, bread and butter or fortified margarine, and a beverage, the poster also includes photographs of a good lunch and a good dinner made with foods from each basic group. Equal emphasis is given to breakfast, lunch and dinner in this typical day's pattern. Surveys show that many homes still skimp breakfast, which is one of the most important meals of all, since it represents the foundation of the day's activity and of other meals to follow. A missed or skimpy breakfast means lost nourishment that can't be made-up during the rest of the day, since modern nutrition apportions approximately one third of a day's food at each of the three meals.

Penicillin for Venereal Diseases

—An Editorial by MORRIS FISHBEIN

SINCE penicillin is now generally available throughout the country, great danger exists that people who may try to treat themselves by taking penicillin by mouth, may really do themselves more harm than good. The National Research Council warns against self-treatment with penicillin for the venereal diseases. For more than two years the various ways in which penicillin can be used in treating gonorrhea and syphilis, and the dosages necessary for successful treatment, have been studied in the large clinics of the United States. The research was coordinated by the Committee on Medical Research of the Office of Scientific Research and Development, and officers of the U. S. Army, Navy and Public Health Service cooperated in the investigations.

Now it has been established that penicillin practically always cures gonorrhea—sometimes called a dose, or strain or clap—in one day, provided that the drug is given in sufficient amounts. However, people who have had penicillin treatment for gonorrhea should have their blood tested by the Wassermann or Kahn tests or some of the other tests for syphilis for several months after to make sure that they were not infected at the same time with syphilis. The small doses of penicillin that are used for gonorrhea do not cure syphilis. Sometimes they serve to cover up or mask the presence of the syphilis by stopping the seriousness of the symptoms without controlling the disease. Although penicillin at this time seems to be the best, safest and quickest method of treatment now available for syphilis, the ways in which it can be used for all of the different forms of syphilis are still under investigation. The value of the drug in recent infections with syphilis has been established and it has been proved that the earlier a patient gets treatment, the better his chances of cure. Penicillin is also valuable in preventing syphilis from appearing in unborn babies by giving the treatment to infected, expectant mothers. Penicillin has proved useful in checking some of the late forms of syphilis, such as that which attacks the brain and the spinal cord, and diseases like general paresis or softening of the brain and locomotor ataxia, which are also due to the organism of syphilis.

Fortunately, penicillin is a non-toxic drug when compared with arsenic, bismuth, mercury and some of the other drugs previously used in treating syphilis.

In its report, the Committee on Venereal Diseases of the Division of Medical Sciences of the National Research Council provides also some words of caution. Because of the character of the venereal diseases, the committee does not yet advise treatment of syphilis with penicillin given by mouth. Injection of the drug into the muscles is certain in getting penicillin into the tissues. The injections must be given, however, every two to four hours, day and night, for periods of time as long as 7½ or 8 days, and sometimes even longer. In some cases of syphilis which are especially severe or which have lasted for a long time, arsenic, bismuth or the fever treatment must be used together with the penicillin, or after the penicillin treatment, in order to make certain that the disease is fully controlled. People who have had penicillin treatment must be checked again and again by complete examination and by use of the Wassermann or similar tests in order to make certain that they have not relapsed. In cases in which the disease does show up again, it is necessary, of course, to repeat the treatment.

Experience in the large clinics has shown that the blood test may not become negative after penicillin, or any other form of treatment, particularly when patients have had the disease for a long time. It is not essential, however, that the blood test become negative in such cases for the disease to be fully controlled. Failure of the test to become negative right away should not discourage the patient.

Remember, however, that it is never safe for any one to treat himself for syphilis with penicillin or any other drug in any manner. When the doses of the drug are too small, when the timing of the treatment is irregular or unsatisfactory, or when treatment has not been given for a long enough time, such self-treatment may be more dangerous than no treatment at all.

While medical science has made a tremendous advance against syphilis and gonorrhea so that it seems possible now to promise that one day venereal diseases may be as fully controlled as are typhoid fever and diphtheria, research has not stopped. New compounds of penicillin and new methods of use are being tested every day, and all sorts of combinations of different forms of treatment are being tried, with a view to finding the best and most certain methods for the control of these diseases. Apparently several more years of study will be necessary before more definite conclusions can be offered.

THE SPOILED CHILD

By C. ANDERSON ALDRICH

THERE is no problem in the field of child care which, from the standpoint of the welfare of the race, matches in importance that of the spoiled child. His disrupting effects are felt in families; spoiled children are found in jails and penitentiaries; undeniable traces are seen in the antisocial acts of leaders in all walks of life; and a glance at the past history of dangerous dictators reveals the same telltale footprints. It is no exaggeration to state that our modern world is ridden by the wilful dominance of many grown-up spoiled children. Hitler's personality is typical.

Because the nature and cause of spoiling are greatly misunderstood and because proper understanding has, in my experience, led to rather easy prevention and even to cure of this serious condition, I shall first describe the picture of typical spoiling and then consider its original causes. Finally, I shall consider what can be done about it.

I have in mind the case of a sparkling 3 year old girl, Mary, who came to see me a little over a year ago. She came in by dint of much dragging and hauling by her parents, with screams, kicks and tears (liquid profanity rather than fear, I am sure). The mother, a bright eyed, attractive, young brunette, having closed the door, turned to me and burst out, "I don't know what we can do! Bob and I have followed all the rules. We have made her eat the right kind of food at the right time. We have tried to make her sleep as much as we were told. We have trained her in toilet habits from the time she was 8 weeks old. We have done everything right!

"Now look at her! She won't eat, she won't sleep and she soils herself day and night. She screams if I take her to any strange place—even to her grandparents. She refuses to do what we ask and insists on doing practically everything we forbid her. We have punished and argued. We have withheld from her the things she wants most. We have tried all the tricks in the books. I think she hates me. What now?"

"If what you say is true," I said, "it would only be natural if she did hate you. The important point is, do you hate her?" With a startled look the mother immediately said, "I suppose I do. How could it be otherwise? We fight all day and most of the night. My husband and I have given up all our social pleasures because she demands our constant attention. Why has this happened to us?" Tears of self pity were on the way.

Right now I fear some readers are saying, "A case of child rejection. Of course, she is in trouble. This mother needs a psychiatrist to find out why she rejected her baby." But I think

the matter is much simpler than that. This mother did not reject her child from the beginning. She and her husband keenly wanted a baby girl and loved her at the start. They do not love what they have now. Certainly she doesn't have a lovable personality.

What are the characteristics of this little girl? In the first place, she is acting on a highly emotional plane with no evidence of self-control. Quite clearly she hasn't learned any of the early lessons of self-discipline. As a result, she doesn't eat, sleep or eliminate according to her own or any other schedule.

Secondly, she is negativistic, opposed to any positive requests made by her parents and belligerently disobedient when it comes to prohibitions.

In the third place, she is a demanding, overacting little piece of dynamite, occupying the center of the household stage every moment of her waking hours. Let us see how this unpleasant situation has developed.

Popular belief would tell one that this is caused by overindulgence, that her parents were to blame for letting her get away with all this nonsense, that they should have cracked down on her at birth, that the little barbarian needed to feel a restraining force from the start so that she could never get out of hand: "Never pick up a crying baby. Never allow a child to select how much or how little she wants to eat. Make your baby sleep the prescribed time even if she cries to get up. Begin to train your baby for bowel control as soon as she is a few weeks old. Do this, do that, run the routine instructions, the approved directions."

It may be possible to train animals by force, but most human beings certainly don't knuckle down to that method. Any self-respecting baby will fight to the last ditch against such management. Human beings are tough, the toughest in the world; otherwise, they wouldn't have spent practically their last ounce of energy beating each other over the head on a global scale in the most ferocious conflict ever seen.

No, this typical spoiled child was not indulged from the start. Quite the contrary. She is a child whose parents tried the application of too-rigid training and forgot or feared to apply the most important factors which make a well-behaved child. These factors are respect for her individual rights and rhythms and unfailing affection.

Any one who cares to do so may study, as I have, the early history of spoiled children. In vain will he search for a story of indulgence at the start. With tiresome regularity he will find the same old tale of strict adherence to rigid forms of child training and an inhuman sort of reliance on the theory that affectionate treatment is bad for babies. And I am certain that parents are not to blame for this technic. It is their instruction which is at fault. Every mother wants to love her baby. Perhaps it will help us to understand what is going on in thousands of homes today if we investigate more closely this typical history, that of 3 year old Mary of whom I spoke in the beginning.

The parents of this little girl were instructed at her birth that strict training in the bodily functions from the very outset was necessary for happy childhood. To that end she was given an inflexible feeding schedule at four hour intervals; however, the 2 a. m. feeding was omitted. It was felt that the first would train her in regular eating habits and that the second would teach her to sleep all night. The parents were instructed to feed her exactly 3½ ounces at each nursing and to supplement what she got from the breast with the required amount of other food.

They were also told that under no circumstances were they to pick up the baby if she cried, that such handling so conditioned the baby that she would always cry to be picked up and that sound sleep habits could be attained only by strict adherence to the printed schedule from the start. Ironically enough, Mary was provided with a pink, frilly basinette with downy pillows and blankets and a bedroom of her own, all decorated with gamboling animals and rosebuds. Sometimes I have thought that the contrast between the physical environment and the type of physical care some children get is almost gruesome—for example, pleasant, comfortable things and hard, uncompromising, relentless routines of care.

The instructions also begin within a few weeks to assume command over the infant's bowel movements. The mother was told that regular bowel habits depended on her insistence on a daily evacuation at a prescribed time. In order to do this the child, at 4 weeks, was placed on a pot at 9 a. m. daily, a suppository inserted and a daily movement was thus obtained.

I have gone into some detail as to these early instructions because, as I shall show, they are designed to produce, rather than to prevent, typical spoiling, before a baby is 6 months old. The future effect of mistakes made in early babyhood has never been sufficiently emphasized. A baby, off to the start Mary had, has three strikes called on her before her brain begins to function. No truer statement has ever been made than, "As the twig is bent, so is the tree inclined." The only trouble is that no one has ever applied this to a young enough twig.

What happened at the very start in this typical case? First, as to feeding, the child happened to be a very dynamic infant, equipped with a compulsive three hour feeding mechanism, as many babies are. From the first few days in the hospital nursery she woke up an hour before feeding time screaming her hunger, kicking her legs, threshing her arms about and vainly turning her mouth with seeking lips from side to side. Several times a day she did this until she kicked raw sores on her ankles and knees and her bed sheet was stained with blood. The nurses then bandaged *(Continued on page 942)*

TOYS can be divided into several different groupings according to the type of play they suggest. The tables on these pages have been prepared to give a more complete picture of the actual toys that are suitable and available for various developments at various ages. Many of these toys fall under several headings. For example, a ball can be classified as a toy for development of strength and skill, social development, or dramatic and imitative play, and also as an aid in school activities. Strength and skill are required to throw the ball accurately. More than one can play together—bringing in the social development. The players may attempt to act like their chosen baseball hero, and so the imitative classification might be given. Playing ball games definitely aids in school activities in leadership, cooperation, sportsmanship and following directions.

Toys will be classified under the following headings: (1) materials for development of strength and skill, (2) materials for constructive and creative play, (3) materials for dramatic and imitative play, (4) toys for social development, (5) artistic development—arts and crafts and (6) toys to stimulate knowledge and aid in school activity. The age groups are the toddler, 1 to 3 years; the preschool child; 3 to 5 years; primary, 6 to 8 years, 9 to 12 years; 13 to 15 years; and 16 to 18 years. Each of these charts can serve as a buying list by first considering whether or not, and how well, the particular toy meets these four requirements:

1. Is the toy of good quality material, sturdy and well built?

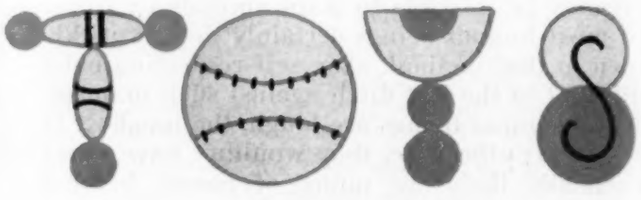
2. Can it be easily and effectively sterilized or cleansed?

3. Is the toy safe? That is, does it have nonpoisonous paint, no sharp edges, nonsplintering wood and other safety features?

4. Does it stimulate activity in the child; can he use the toy in several different ways?

These lists are not complete, of course, as new toys and toy materials are constantly being put on the market. They merely give you typical toys under the specific classification and indicate the age groups most interested. Since the individual child's interest will of necessity be considered when purchasing toys, it may be found that some 3 to 5 year olds are interested in and can use toys listed for the 6 to 8 year olds. And, too, some 6 to 8 year old toys as listed may be much too advanced for your 6 to 8 year old, and toys under the 3 to 5 age grouping will be more suitable. It is impossible to state interest by definite ages with no alteration. Remember, each child is an individual, and his activity must be chosen with consideration of his own tastes and preferences.

A Purchasing Guide for Toys



By LOIS K. IDE

Note emphasis on bright colors. This is indicated because control over eye movements is the earliest motor control. Play materials for development of strength and skill must of necessity be sturdy and well built. The same toys can be used for a long period of time, if so built; only the use of the toy will change, and the toy itself need not be discarded for another new toy or another type of toy.

PLAY MATERIALS FOR DEVELOPMENT OF STRENGTH AND SKILL

Infant: 3 mos. to 1 yr.	Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.
Bright colored ribbons	Push and pull toys (flat, one piece type)	Push and pull toys and take apart toy interest continues
Bright colored balloons	Take apart, push and pull toys. These come in many forms with detachable disks, squares, triangles and cylinders	Wagon (large enough to sit in)
Bright colored, large, strongly strung plastic or wooden beads	Take apart toys (color cones, block sets, animated figures, cone trees, and many others)	Wheelbarrow
Plastic measuring spoons	Kiddie car	Sled
Bright colored beaded animals or people	Large rubber ball	Tricycle
Dumbell rain rattles	Hobby horse	Large rubber ball
Ordinary sewing spools	Mallet and peg set	Wagon and block sets
Brightly colored blocks (at least 1½ in. square)	Large clothespins	Boxing gloves
Teeter swing	Large wooden spoons	Slides
Walker		Trapeze sets
Play pen		Graduated sized boxes

PLAY MATERIALS FOR DEVELOPMENT OF STRENGTH AND SKILL

6 to 8 yrs.	9 to 12 yrs.	13 to 15 yrs.	16 to 18 yrs.
Tricycle	Swing and trapeze	Swing and trapeze	Bicycle
Scooter	Bicycle	Bicycle	Sled
Wagon	Sled	Sled	Croquet set
Swing	Baseball and bat	Baseball and bat	Tennis equipment
Sled	Catcher's mitt	Catcher's mitt	Volley ball
Croquet set	Football	Football equipment	Golf clubs
Soft ball	Croquet set	Tennis equipment	Badminton set
Catcher's mitt	Roller skates	Basketball	Basketball
Small bat	Indoor dart games	Archery sets	Archery set
Hammer, nail and wood design set	Bathing suit and swimming equipment	Roller skates	Boxing gloves
Tenpin game	Boxing gloves	Shuffle board	Ice skates
Water toys	Boy scout axe and knife	Swimming equipment	Shuffle board
		Trapping equipment	Swimming equipment
			Track equipment

In the normal, healthy child, vitality fairly effervesces in every move. Because of this excess energy, the materials listed here will develop the muscles of the entire body as well as encourage sportsmanship, cooperation, conformity to rules of the game and preparation for sports participated in by adults.

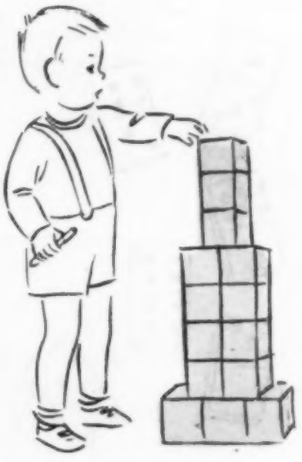
MATERIALS FOR CONSTRUCTIVE AND CREATIVE PLAY

Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.	Primary: 6 to 8 yrs.
Take apart toys	Wooden bead and apron sets	Clothespins, box and spool interest continues
Block sets	5 to 10 piece puzzle with large pieces	Village building blocks
Boxes of graduated sizes	Clothespins	Tinker toys
Spools	Spools	Simple embroidery sets
Clothespins and boxes	Boxes	Paper construction
	Sandbox	Small carpentry set: hammer, nails, screws, square, saw, screwdriver
	Sewing cards	20 to 75 piece jigsaw puzzle
	Hammer, nail and wooden piece design sets	Beadwork: large plastic and wooden beads
		Slottie animals

Constructive and creative play in the small child is simple and without detail. Larger muscles are used rather than small muscles which have not yet fully developed. Much supervision is usually given, and too little opportunity for experimentation is possible because of this excess supervision. Introduce this type of play early in the child's activity, as it takes such a great part in his school curriculum and interest later. This simple, constructive play serves as a basis for more complex constructive play later.

MATERIALS FOR CONSTRUCTIVE AND CREATIVE PLAY

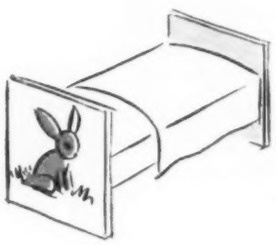
9 to 12 yrs.	13 to 15 yrs.	16 to 18 yrs.
Building logs	Same materials of interest but used in a more complicated way	Same activities but still more detailed
Tinker toys	Crocheting materials	Hobbies have very definitely begun to develop. Many of these hobbies have proved to be of occupational value and of value in everyday living as well
Village building blocks	Knitting materials	Wood carving
75 to 275 piece jigsaw puzzles	Bead work — ¼" diameter plastic beads or Indian seed beads	Metal crafts
Garden tools	Oilcloth constructions	
Modeling sets: boat, airplane, train, house, animal and bird	Terry cloth construction	
Sewing materials	Leather crafts	
Paper construction	Reed and raffia crafts	
Embroidery materials	Wood burning sets	
Oilcloth designing	Plaster molding	



More precise finger control is now in evidence. Eye and hand coordination is well developed, and more precision work is possible. Imaginative play continues, but hobbies play the big role in constructive play beginning at about 12 years. This type of play should be encouraged more and more in the handicapped child, so that real skill will be apparent for job placement and for life work. Well made, hand made articles are in great demand, and prices will be willingly paid for good work.

MATERIALS FOR DRAMATIC AND IMITATIVE PLAY

Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.	Primary: 6 to 8 yrs.
Cuddle toys, preferably of slip skin type	Lacing shoe toy	Same toy materials are of interest but the dramatic play is much more complex
Soft dolls: rag, stocking, character of cotton stuffed type	Village building blocks	Kitchen utensils: mixing bowl, dishes, spoons and forks
Blocks: commercial square blocks, blocks of scrapwood and spools	Small wooden cars, trucks, boats, soldiers, airplanes and trains	Toy guns and telephone
Clothespins and boxes	Paper dolls	Medical kits with candy pills, play thermometer and nurse's cap
Stiff, heavy-backed picture books	Soft dolls	Dress up clothes, mother's clothes, cowboy outfits, Indian costume, policemen's garb, Hallowe'en costumes
	Doll house	Pets are excellent for teaching responsibility; child will imitate parents in caring for pets—dog, cat and rabbits
	Doll house furniture	Dancing lessons
	Housekeeping equipment—broom, dustpan, dishes	Toy musical instruments
	Doll bed	
	Doll carriage	
	Picture books	
	Dancing lessons	



The child is a great imitator. The 12 month old baby quickly imitates expressions of elders as well as treatment of toys, as shown in loving of cuddle toys and putting toy dog in bed with him for nap. By imitating, the child learns how to do things. In the small child there is little real dramatic play until about 5 years. Up until that age it is merely an imitation and not true dramatics.

MATERIALS FOR DRAMATIC AND IMITATIVE PLAY

9 to 12 yrs.	13 to 15 yrs.	16 to 18 yrs.
Make-up kits	Materials to make cuddle toys and character dolls	Same materials of interest but use much more complicated and with definite pecuniary benefits in mind. Hobbies play a major role
Character dolls	Materials for one act plays	Cuddle and character dolls
Materials to make dolls, doll houses and furniture	Decoration and furnishing for own room	Interests very similar to those of the adult
Music lessons	Desk and chair	
Pets of all kinds		

The 9 to 15 year old is striving in every way to be like the adult. The 16 to 18 year old considers himself an adult and acts accordingly as much as possible. Acceptance of more responsibility is important, and duties will be carried out in same manner as has been observed by child watching adults. Operettas and class plays are important in grade and high school life. Many activities listed under constructive and creative play can be listed here, such as imitation of elders in all types of activities.

TOYS FOR SOCIAL DEVELOPMENT

Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.	Primary: 6 to 8 yrs.
Soft dolls and cuddle toys	Wagons	Marbles
Wagons	Tricycle	Dominoes
	Dishes	
	Jingo game	
	Old maid	

Social development progresses slowly. Even those in nursery school show lack of social awareness at times. Solitary play is most enjoyed up until about 4 to 5 years. Interference of another player is not appreciated. It is important, however, that the child learn early the presence of other people in play and work. This is a social world, and little can be accomplished without some help from others. Children should be taught early, by 18 months at least, to share toys with others. Selfishness can be avoided if such training is started early in life.

9 to 12 yrs.	13 to 15 yrs.	16 to 18 yrs.
Card and board games of all kinds	Card and board games	Card and board game interest continues. Interest in club groups much more decided
Dancing lessons	Correspondence clubs	Books and magazines
Parties, group games	Picnics and hikes	Dancing
	Clubs	Lunch box socials

Activities of a social nature are generally participated in now in numbers rather than by two people only. However, best friends and pals will chum together, spend much time together and enjoy their many secrets with each other. Hi-Y, Girl Reserves, Boy and Girl Scouts, Campfire Girls, 4-H Clubs and any number of other organizations have done much to make youth conscious of its social responsibilities. Theater parties, birthday parties, holiday get-togethers, and dancing groups, also, aid the young man and woman to abide by social ethics.

(Continued on page 946)

Surgery for Hernia

By LOUIS CARP

A HERNIA or rupture is an abnormal protrusion of any tissue through an abnormal opening in the wall of a body cavity in which the protruding tissue is normally confined. Most hernias originate from the abdominal cavity. There are descriptions of the condition even before the time of Christ. In those days, hernial swellings were treated by primitive methods, such as light diet, bandaging, rest, cathartics, massage and the local application of cold compresses. It was not until the thirteenth and fourteenth centuries that surgeons in Italy and France began to operate for hernia, with the limited knowledge which was excusable for those days. The surgical treatment of hernia went through a long process of evolution up to the beginning of the nineteenth century. That was the beginning of the modern era in the surgery of hernia.

Any weak spot in the abdominal wall, plus an increase in pressure within the abdomen, predisposes to the formation of a hernia. A baby may be born with such a weak spot, and if a hernia results immediately it is known as a congenital hernia. The appearance of a hernia in later life is known as an acquired hernia. There are a number of conditions which favor the development of hernia. It is well known that heredity plays some part, for about 25 per cent of patients give a history of hernia in their parents or grandparents. More men than women have hernia. The more active period of life, between 15 and 50 years of age, with its increased physical exertion, is the period during which the condition occurs most often. Other predisposing factors are operative scars, obesity, weak musculature, pregnancy and increased bulk in abdominal organs. The immediate exciting causes of hernia are conditions which produce an increased pressure within the abdominal cavity, such as coughing, straining and lifting heavy weights. There may also be an injury to the abdominal wall. In countries where compulsory military training exists men have been known to produce a hernia by forcibly tearing the tissue around a normally weak spot in the abdominal wall, in order to avoid military service. Most hernias occur in the groins; these are called inguinal hernias.

The lining tissue of the abdominal cavity is known as the peritoneum. When this is forced through a weak spot in the abdominal wall, it creates what is known as the hernial sac. This sac has contents which may be the intestine, the appendix, the female tube, the omentum, which is a protective apron in the abdominal cavity, or, in rare instances, some of the larger abdominal organs. Thus the sac and its contents form the hernial swelling. In most instances this swelling can be pushed back into the abdominal cavity. It is then known as a reducible hernia. Often, however, the neck of the sac is so constricted that the hernial contents cannot be pushed back. This is an irreducible hernia.

A person with a hernia may be unaware of its presence, either because a swelling is not noticed or because there are no symptoms. When symptoms are present, they may vary from a feeling of weakness at the affected site to a sense of discomfort, pressure, dragging or pain. This may be intermittent or constant, sharp, dull or tearing in character. All these symptoms depend on the size and anatomic condition and contents of the sac. Thus, if there is intestine in the sac, intestinal symptoms such as gas, cramps or constipation may result. Similarly, a piece of bladder in the sac may produce urinary symptoms. When a hernia becomes strangulated—that is, when the neck of the sac or the sac itself tightens or closes so that circulation of blood to the sac and its contents is seriously impaired, the patient becomes very sick, with intense pain, vomiting, abdominal distension and high fever.

In the ordinary case of hernia, the physician may or may not be able to see a swelling. It can be made more apparent by asking the patient to cough or strain. These actions produce increased intra-abdominal pres- *(Continued on page 949)*

The Americas Fight —

THE short-flight Anopheles mosquito shows few of the characteristics of the modern bomber, but allowed to swarm "on target" he can cause human and economic devastation equal to man-made aerial punishment.

This grim teaching of medical history became a much-thumbed chapter in Inter-American Defense planning after Pearl Harbor.

The "fire power" of the Anopheles mosquito is that most prevalent of the world's diseases—malaria! And, basking in the warmer climate belts of the world—favorite target areas of the anopheles—are a number of American Republics.

In various areas of these republics, malaria has been and continues to be the most important health problem. For this reason Inter-American health and sanitation projects are keeping pace with economic development. Doctors and sanitary engineers with their anti-malarial projects march abreast of rubber planters, miners, agronomists.

To the American Republics war brought the impact of widespread economic developments. Hosts of workers were dislocated, were moved from their homes to near or remote war production centers.

Japan's quick seizure of the rubber producing East Indies and Malaya sent thousands of rubber tappers into the jungles of Brazil, Bolivia, Peru, Ecuador, Central America. Miners moved into the Rio Doce valley in Brazil to garner needed mica, quartz crystals, iron ore.

Strategic minerals—manganese, tin, platinum, commercial diamonds, vanadium, and others—were sought in Brazil, Colombia, Venezuela, Ecuador, Bolivia for the wartime needs of the United Nations.

The Central American Republics—Guatemala, Nicaragua, Honduras, Costa Rica, and El Salvador—launched campaigns for increased production of abaca, balsa, cinchona, rotenone, mahogany.

Peru increased production of copper, lead and molybdenum. Venezuela continued as a prime source of petroleum. Ecuador greatly expanded her output of balsa, used in the manufacture of life rafts and floats and aircraft. The Dominican Republic turned over its sugar crop to the United Natiions. Haiti engaged in sisal and rubber-growing campaigns.

Such was the war-time economic backdrop in the republics whose national terrain contain anopheles breeding areas. It is a geographical canvas extending over millions of square miles of torrid jungles and mangrove-matted lowlands.

Not only did war open markets for their pro-

By spraying insecticide on mosquito breeding places, sanitary engineers are freeing the Americas of malaria

Malaria

By MAJOR GENERAL GEORGE C. DUNHAM

duction of strategic materials; it stimulated national and regional plans for long-term development progress.

In many places these economic movements are stalked by the world's No. 1 public enemy—malaria! But just as omnipresent are the forces of the Inter-American Cooperative Health Services. To carry on the fight against malaria they are armed with knowledge, medicine, and equipment. Release of the magic crystalline insecticide DDT, which proved such a famous life-saver in the jungle warfare of the Pacific, opens up broad horizons for the extension of malaria control to rural communities of Latin America.

In this connection Service officers in the various republics are studying recommendations for experiments with DDT in small communities drawn up by Major David B. Lee, malaria control consultant of the Institute of Inter-American Affairs, who was in command of the Fourth Malaria Control Unit of the United States Army in Australia and New Guinea.

The recommended experiments would seek to show the value of DDT control as township enterprises, placing a cheap and effective anti-malarial weapon in the hands and within the often slender financial resources of rural communities. It is believed that DDT systematically sprayed on the walls of village homes, outhouses and stables, will do much to push forward the anti-malaria wars of any given nation.

But, as Major Lee has said: "there is no royal road to malaria control!" Until DDT allotments reach the level required for widespread application, entomological surveys, swamp drainage or fill and other control work goes on. At the head of it is the Inter-American Health organization formed as a result of a resolution adopted by the Rio de Janeiro Conference of American Foreign Ministers of 1942. The Conference urged joint effort by the Americas in tackling hemisphere health and sanitation problems.

In fourteen of the other American Republics the health services have undertaken some 164 projects for malaria mosquito control. These are designed to meet local necessities in areas ranging from Belem at the mouth of the Amazon, to Chimbote on the Peruvian Pacific and from the volcanic crater lake region of Central America to the mineral regions of Brazil's Rio Doce Valley.

Cooperative agreements reached by the United States with 18 of the other Americas provided for the organization of Inter-American health services. These are linked in a continental chain of cooperation with the Institute of Inter-American Affairs, an agency of the Office of Inter-American Affairs, which has assigned doctors, engineers and other *(Continued on page 934)*

Loss of one eye does not cut vision in half, as most people assume. Actually, the loss is only one fifth

By
PHYLLIS DUKE-ELDER

One Eye Sees Everything

THE loss of an eye is not a pleasant thing, of course, but actually it is not much of a handicap. The one-eyed man sees about as well as ever, soon learns to judge distance as well, can do close work as well as ever, and is in no more danger of eyestrain, or of eye accident, than the man with two eyes.

Unfortunately, this is important to a lot of people. Even in peacetime, many persons lose an eye; in 1942, for example, there were 70,000 industrial eye accidents in the United States, of which 5,000 resulted in the loss of one or both eyes. In war, eye injuries are a major problem. In World War I, eye injuries were about 2 per cent of total casualties. In World War II, the extensive use of mines, booby traps and grenades, which inflict multiple wounds, roughly doubled the rate.

In our hospital, we have handled many thousands of men who have lost one eye, men who must not only be treated physically, but who must be educated to go back to work either in the Army, or in civilian life, without the crushing sense of inferiority which so often they feel as they face this new condition of life. What they need above all is the simple truth in simple words. This is what we tell them:

People who lose an eye naturally think they have lost half their field of vision. This is not true; the loss is approximately one fifth of the total. This is small, relatively unimportant, and by no means implies being completely blind on one side. We all explore the regions outside the field of vision by continuously and unconsciously turning the eyes and the head; in a short time the one-eyed man, by accentuating this habit until it becomes automatic, is so little inconvenienced by his disability that he becomes unaware of it.

There is some loss of the stereoscopic sense—the ability to judge distances. However, this applies only to short distances of two feet or so. In judging distances greater than this, we rely essentially on processes carried out in the brain, and these processes work just as well with one eye as with two. At first the loss of stereoscopy is often irritating and embarrassing—the one eyed man pours coffee into the saucer instead of the cup, finds it difficult to thread a needle, muffs a fine mechanical job. But after a little time, and with a little care and perseverance, this clumsiness disappears as the brain relies more and more on other data than stereoscopic vision from which to form its judgments.

When a child grows up with one eye wholly or partially blind, he can do everything his two-eyed playmates can do. His brain, relying on one eye from the start, functions perfectly. This is no uncommon thing; not infrequently the child grows up quite oblivious of his "handi-

cap," and is incredulous when told some day that he has one eye which has never functioned. There are large numbers of such men driving cars, working on roofs, scaffolding or ladders, operating all kinds of machines, doing such precise work as tool-making or watch-making, or prolonged close work such as the manufacture of electric light bulbs and radio tubes or clerical work. These men with one bad eye are just as efficient and accurate as those who have two eyes.

When a man loses an eye by injury, he has to learn the change-over from binocular to monocular visual habits suddenly and dramatically, instead of gradually and unconsciously from childhood, so that at first he feels disorientated, clumsy, ill at ease and liable to fatigue; but the majority are equal to their fellows in efficiency, manipulative dexterity and concentration within a matter of months.

The psychologic effects of losing an eye, however, are frequently more difficult to deal with. Here we come up against those long drawn out, corroding fears that ruin a life.

The fear that is most common and most distressing is that the remaining eye will have to do the work of two and will eventually fail. This is not true. The eye, like a motion picture camera, takes photographs continually, and whether or not its fellow does likewise makes no practical difference in the amount of work it does. The suggestion that a man who has lost an eye is therefore unfit for jobs which entail eyestrain, or a concentrated amount of fine visual work—clerical work, fine machine shop work, and so on—has no basis in medical fact. It is true that initially such men may feel fatigue, get headaches and apparently suffer visual embarrassment, but this is because the visual mechanism in the brain, accustomed to deal with two films, has now to get used to dealing with one. This is a temporary difficulty. It is overcome by habit and practice. It is an entirely different thing from eyestrain, and is essentially a matter of brain fatigue. The remedy is more rather than less visual work, with intermittent intervals of rest for the first few weeks until the new habits are acquired and the new brain reflexes run smoothly. The result is that the one-eyed man can undertake safely and easily work demanding the highest visual concentration; despite popular fears, he runs no medical risk, and he will give his employer as good service as a two-eyed man.

The victim almost always fears that his appearance has been irreparably ruined. But surgery is so far advanced, and modern plastic artificial eyes copy the natural eye so accurately, that the disability is far more psychologic than real. And the person who does detect the injury is likely to regard it, not as a repulsive mutilation, but as a badge of heroism.

A third common fear is that by injury or accident the victim will lose the remaining eye. It is a curious thing that a man who loses an arm or a leg rarely worries about losing the other limb; but the man who loses an eye has this dread, often in extreme form. He avoids bright light lest it hurt the eye; he avoids industrial jobs lest the eye be injured; he shuns even the ordinary activities and contacts of life lest he meet accident. Statistics show that such a fear is quite unjustified. It is obvious that a man with one eye has half the exposure to accidental eye injury that a man with two eyes has. A recent and extensive inquiry in England among industries wherein accidents are common—mining, iron and steel works, chemical works and so on—showed that the accident record of one-eyed workers was minimal, and that employers found them efficient.

England's most famous Admiral of all time—Nelson—was one-eyed. So also is one of our foremost Field Marshals, Lord Wavell, now Viceroy of India. Aviation would seem the most exacting of fields, but in his wonderful flight round the world it was a one-eyed American pilot, Wiley Post, who broke all records. Many pilots injured in one eye have landed their aircraft and brought themselves and the crew to safety. Many gunners, the vision of one eye lost, have carried on until the danger has passed. The most famous of Arctic convoys was brought through storms and the hazards of air, sea and undersea attack by a Captain, now wearing the Victoria Cross, who was blinded in one eye during the battle. And, to consider one of the most exacting and delicate jobs that can be singled out—the surgery of the eye itself—the most famous American eye surgeon of the previous generation lost one eye in the middle of his professional career and thereafter taught himself to operate as beautifully and as successfully as ever.

In this hospital many heartening examples could be cited. One patient—a professional golfer—had a wounded eye removed and while convalescing unexpectedly gave £30 to the hospital funds. He confessed that it was "conscience money": he had slipped quietly out of the hospital to test his old skill in a local competition, won the first prize and returned unnoticed. Now he has returned to his old job, where his only worry seems to be the impossibility of getting golf balls. Another man won a shooting competition. He finished the war in an anti-aircraft battery that obtained a record in flying-bomb kills. Another man, a lawyer, lost one eye, and the other was penetrated by a foreign body. Within three months he was driving a car through the traffic of London. And so on. Some instinctively knew the answers and proved themselves at once; others required guidance. But practically all of them in a short time were active and useful members of the war machine. And the important thing is that they can be equally useful—and happy—members of society in peacetime.

YOUR BACK

A Mechanical Wonder

YOUR back is one of the mechanical wonders of the world. The back is composed of bones, joints, muscles, nerve, blood vessels, ligaments, cartilages and disks.

There are 33 bony segments in the back. Beginning at the back of the head and going down, these are the seven cervical (neck) segments or vertebrae which are movable on each other and at both ends, twelve thoracic segments which are also movable on each other and at both ends, five lumbar segments which are movable, five sacral segments which are fused as one, and four coccygeal ("tail bone") segments which are also fused. The juncture between the lumbar and sacral vertebrae is a frequent spot for trouble. So-called dislocation of the coccyx occurs at the sacro-coccygeal joint, another troublesome site.

Between each two vertebrae in the neck, thorax and lumbar regions there are joints which permit a small amount of forward and backward movement. Side movement and twisting or torsion are possible because the vertebral bodies turn and slide on each other. Between each two of the movable vertebrae there is a cushion, bumper, or shock absorber called an intervertebral disk. Each disk, made of strong, stringy, circularly arranged cartilagelike tissue, has a central nucleus of gelatinous material.

The muscles of the back are among the strongest and most numerous of the body. Each muscle works in conformity with well known mechanical principles of leverage. Some are large, others are tiny, but the great stability of the back is provided by these muscles, and especially by numerous powerful, tenacious ligaments.

To every one of the soft tissues of the back, nature supplies nerves. In addition to motor and sensory nerves for muscle movement and sensation, there are also spinal nerves which carry impulses to the arms, legs, chest and abdomen. The spinal cord is situated in the spinal canal—a long, bony tube made up of segments of each vertebra. Nerves pass from the spinal cord through many small apertures of the spine to convey nerve impulses to muscles and other tissues outside the spine.

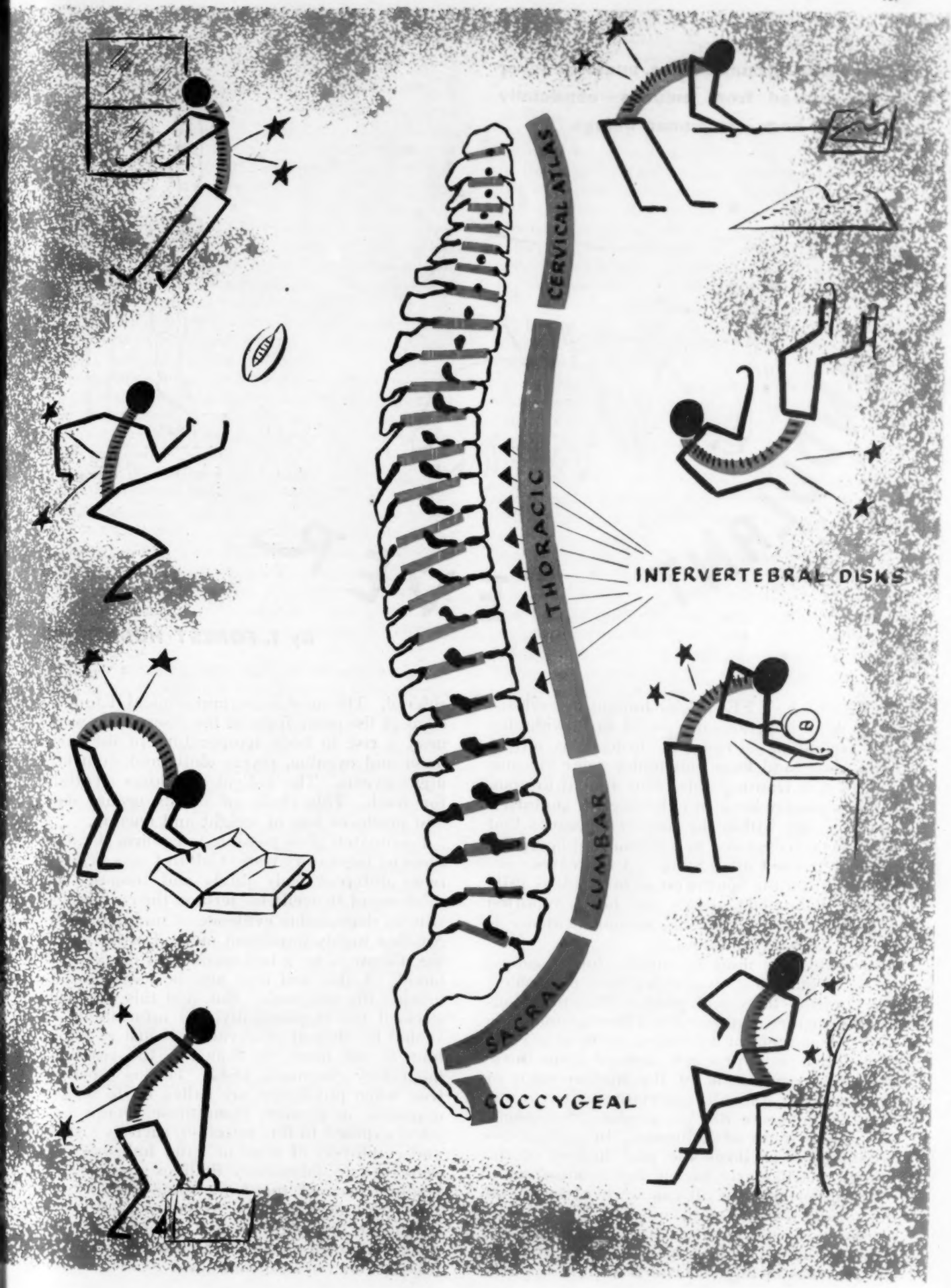
The spine bears a relation to the human body crudely similar to that of the tent pole to a circus or the mast to a sailing ship. It supports the torso or trunk; it measures the height of the human being. Its muscles produce movements of the back, abdomen, chest and pelvis; its bones not only produce essential elements of the blood but also act as storehouses for calcium and other chemical substances. The structure of the bone making up the bodies of the vertebrae differs from that of the shin or skull. The vertebrae are more like sponge candy than hard stone. The spine is like a building that is constantly deteriorating to an infinitesimal degree but at the same time is being reconstructed; it is self destructive and self reconstructive at once. It is self-sustaining; its joints are self-lubricating and self-adjusting within wide limits, and it is motorized or powered by its own muscles.

Cross section of vertebra. Arrow shows aperture through which spinal cord passes

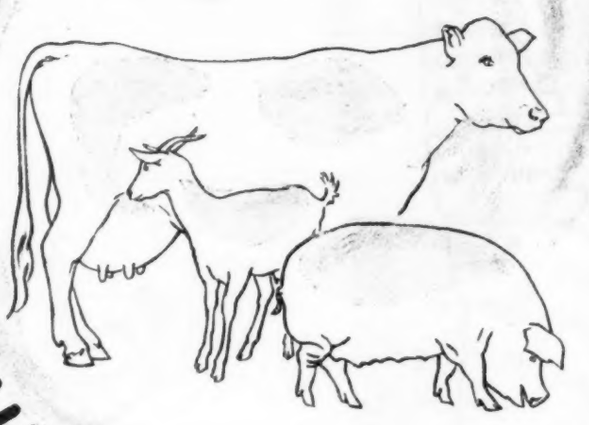
When we consider the intricacies of the back, we soon realize that a human being is the product of the Master Builder, who has combined the skill and resources of the bridge builder, the ship builder, the railroad builder, the structural iron worker, the carpenter, the millwright and the cabinet maker. He has also employed the counterpart of the bricklayer, the hod carrier, the steam fitter, the electrician and the plumber.

Metabolism means building up tissue. We are constantly and con- *(Continued on page 954)*

By PHILIP LEWIN


CERVICAL ATLAS
THORACIC
LUMBAR
SACRAL
COCCYGEAL
INTERVERTEBRAL DISKS

Under some circumstances, undulant fever is transmitted from animals—especially cattle and hogs—to human beings



UNDULANT FEVER

By I. FOREST HUDDLESON

UNDULANT FEVER, or human brucellosis, is an infectious disease of worldwide distribution. Primarily, brucellosis affects cows, goats and hogs, but under some circumstances it is transmissible from animal to man. It has probably been in existence for centuries, but it is only within the past two decades that it has been recognized as a serious public health problem in the United States. A few cases were discovered in the Southwest as far back as 1910. Today, some 4,000 cases are being reported annually. In one state the annual incidence is 5.9 per 100,000 population.

Brucellosis is most commonly found among three of our most important food producers: dairy cattle, hogs and goats. Human beings usually acquire undulant fever through handling infected animals or by eating or drinking unpasteurized food products derived from them.

Clinical recognition of the human form of the disease is difficult, especially in its chronic form. The acute disease produces symptoms not unlike those of influenza. In a diagnosis of human brucellosis the past history of the patient, particularly his or her occupation, is most important. In all cases where there has been close contact with infected cattle, goats or swine, or where there has been a possible consumption of unpasteurized dairy products, the presence of human brucellosis must be considered. The most important clinical diagnostic signs of the acute form of the disease are weakness, a rise in body temperature in the afternoon and evening, severe chills and drenching night sweats. The patient also loses all desire for food. This chain of events occurs daily and produces loss of weight and anemia.

Fortunately, it is possible to confirm the diagnosis by laboratory tests. Cultures may be made from different body fluids and tissues. The recovery of Brucella bacteria in the culture constitutes dependable evidence of undulant fever. Another highly important method of testing for the disease is by a test made with the patient's blood. A skin test may also be useful in confirming the diagnosis. But, and this cannot be stressed too emphatically, the information revealed by clinical observation is just as important, if not more so, than are the results of laboratory diagnostic tests. This is especially true when physicians are called on to make a diagnosis in persons from those groups most often exposed to this infection, such as farmers and employees of meat or dairy industries. In these groups laboratory findings may be misleading, because there are some persons who show a positive reaction to one or more of the diagnostic tests and yet are not infected. The physician must interpret laboratory results in the light of physical findings.

There is little if any resemblance between the acute form and the chronic form of undulant fever. Often laboratory tests are negative in the presence of definite chronic disease. Thus, many cases go unrecognized. While brucellosis should always be suspected when there is fever of unknown origin, a diagnosis of undulant fever should not be made without adequate evidence. A major difficulty lies in the fact that in its chronic form brucellosis is difficult to distinguish from some of the other chronic diseases, especially certain allergies. When it is not possible to isolate the causative agent, the Brucella, the diagnosis must rest on associated signs, such as a history of previous undulant fever, evidence of sensitivity to the Brucella and, most important of all, on a careful weighing of the results of repeated clinical examinations and all the specific diagnostic tests.

Sometimes a person may show certain clinical reactions without actually having the disease; this is the case if one has had the disease in the past and has become allergic to the Brucella organism. Of course, it is a simple matter to eliminate this allergy as a cause of illness. All that is required is to have the patient remain away from animals and abstain from food products which might contain these specific bacterial proteins. The physician then watches the progress of clinical symptoms, and if they disappear it is obvious that they are caused by a Brucella allergen. If symptoms continue, it is fairly certain that they are caused by active infection.

A highly satisfactory and rapid curative agent for human brucellosis is still to be discovered. Immune serums have not proved to be effective. Vaccines are helpful in some cases. Caution should be exercised in their use, however, because of the local reaction which they often produce. Treatment with specially prepared bacterial filtrates has served better than other agents in shortening the course of the disease. The sulfa drugs were tried, but the enthusiastic reports of early investigators have been modified in the light of later findings. Penicillin in its present form has not proved effective as a therapeutic agent in the treatment of undulant fever. This much can be said: The patient should be kept in bed during the illness, and for at least two weeks after the temperature has become normal. Ample amounts of fluids should be administered daily, and treatment to relieve symptoms may be given as needed.

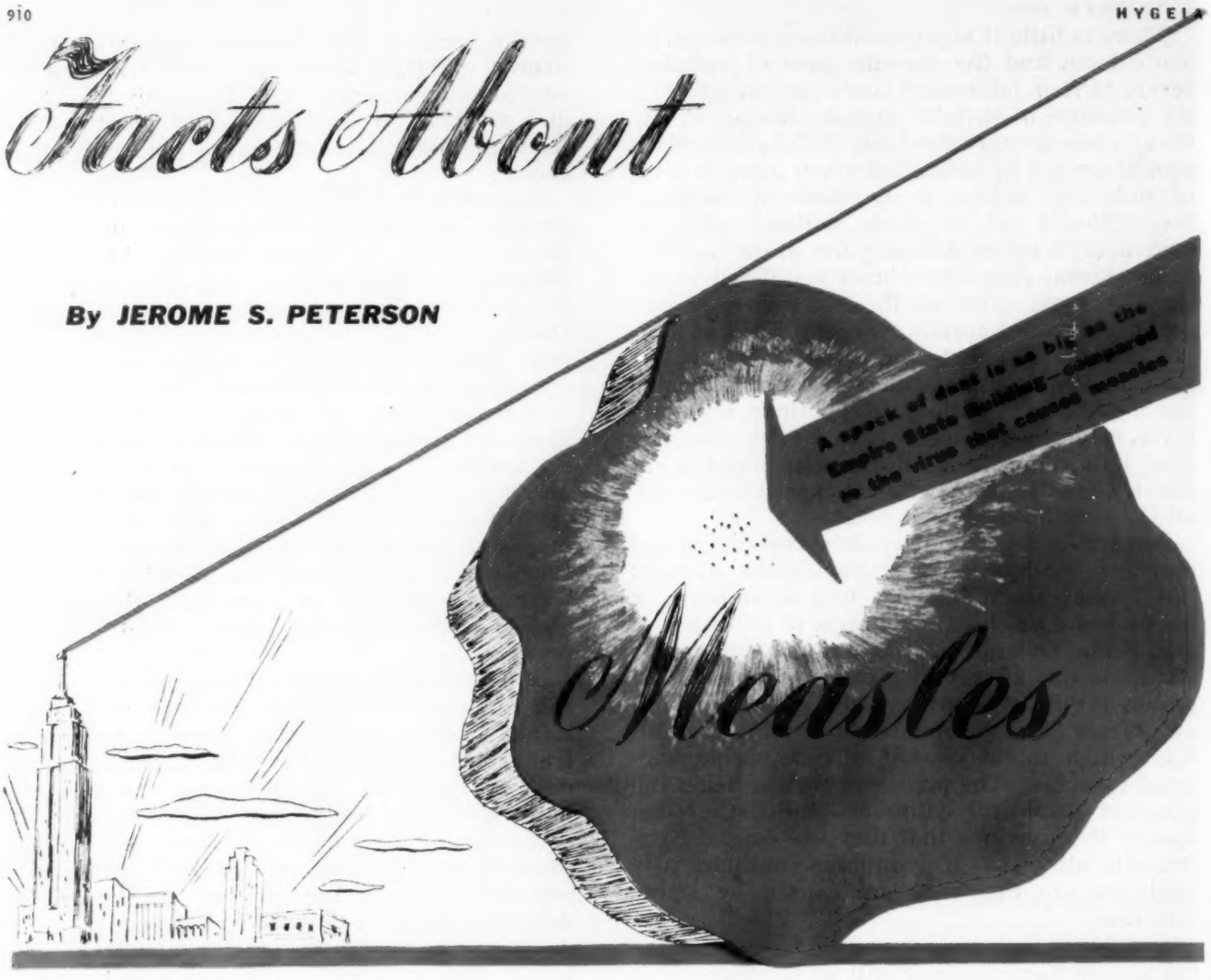
Careful inspection of animals and dairy products should reduce the incidence of undulant fever, and for many years now the human and animal health agencies in most of our large towns and cities have had in operation various control measures designed to prevent its transmission. If these measures continue, and if they are extended to smaller communities, I am sure that the disease will never become a truly serious health problem. On the other hand, it must be remembered that a major source of the disease is contact with infected animals. To a degree undulant fever may be considered an occupational disease. The fact is that farmers and workers in food-processing plants suffer from undulant fever far more than any other group.

Unfortunately, protective practices that should be used to prevent transmission of the disease to these groups by contact have not been given the attention they deserve. Yet there are a few precautions which would prove most effective. During the life of infected animals there is one time when the chance of contact infection is greatly increased—that is, at the time of parturition or abortion. If farmers would use more hygienic precautions in handling their cattle, or, better still, call a veterinarian to give them obstetrical care, a large percentage of infections could be prevented. Education along this line may well reduce the incidence of the disease. Physicians and veterinarians should recognize their responsibility in informing the farmer about contact infection and how it can be prevented.

As yet, there is no record to prove that a person can contract undulant fever from another infected person rather than from an animal or from unpasteurized dairy food. However, that does not preclude the possibility that this can happen. It is important, therefore, that in homes where there are active cases of undulant fever, sanitary practices should be followed during the course of the illness. We now have definite experimental evidence that a recently developed bacterial agent will protect human beings against infection. However, it is doubtful whether it will ever be necessary to immunize persons other than those who are employed on farms or in the various food-processing industries. The majority of people in this country are already receiving adequate protection through our present methods of handling animal foods. These practices should be extended to include more people, especially those living in small communities and on farms. To prevent undulant fever from becoming an increasingly serious public health problem, pasteurization of all milk and cream for human consumption should be required first. Second, brucellosis should be eradicated in domestic animals. Third, prophylactic vaccination of all persons who come in contact with possibly infected animals is advisable, particularly for farmers and workers in the food industries. Fourth, public health education should be accelerated, especially in rural communities. The proper application of these measures naturally involves cooperative understanding and action among livestock owners, animal food processors, practicing physicians, veterinarians and public health officers. When each group begins to understand the others' points of view and they work together toward a common goal, then undulant fever will become a disease of the past instead of an active threat for the future.

Facts About Measles

By JEROME S. PETERSON



EVERY one knows that those pints of blood you give to the Red Cross saved many a soldier's life—but did you know that the same pints of blood are saving babies' lives right here at home? It sounds hard to believe, but it's true. After the blood bank gets your donation, the plasma, or liquid portion, is dried, packed and ready for shipment. From the part that's left behind, though, scientists can extract a substance that has the power to protect babies and young children against an attack of measles—if it is used within eight days of their exposure to the disease.

But perhaps you're a bit confused. How do you save a child's life by protecting him against measles? Measles may mean living for a few days with a red-spotted rash and inflamed eyes, you think, but it isn't a serious disease—it doesn't kill people! That's what you've probably heard; many people take measles as a matter of course, a trifling interlude in a child's life. This attitude is not entirely mistaken. When measles strikes an average, healthy boy or girl of 6 or 8 or 10, it may keep him out of school and play for a while, but that's usually all there is to it. The healthy child takes measles in his stride. His natural resistance usually makes the germs a "pushover" for him.

But all children aren't that lucky with measles. In babies and young children of preschool age, measles can prove highly dangerous. A 2 year old just may not have the strength to cope with the germs a boy of 10 brings home from school or playground. Measles is one of the leading causes of death in children under 3. Not that measles itself is usually the killer, but it can weaken a child so that it makes him an easy victim for pneumonia or other serious after-effects. Ear disease and inflammation of the brain have been known to follow on the heels of measles, or to accompany it.

Some people don't know these facts about measles. Some mothers unknowingly invite tragedy by exposing a young baby to measles—they figure he's bound to catch it sooner or later anyway and welcome the chance to get it over with. These mothers reason that they're actually doing the baby a good turn by getting measles out of the way so soon—before the baby really knows what sickness is all about. Perhaps in some cases an older brother or sister has caught measles, and the mother figures it won't be any more trouble to care for two sick children than for one, so she thrusts the baby into close quarters with the older child, and lets the inevitable happen.

Probably some of you would interrupt me, if you could, to say that you know of several children who had measles when they were still in diapers, but they were hardly sick at all. Maybe so, but they're the lucky ones. Many mothers have learned, often too late, that measles is no laughing matter.

Today, though, thanks to the new measles preventive made from the blood of people who have had measles, this disease need no longer be such a menace to babies and young children. They need be no more afraid of it than their older brothers and sisters are. One dose of this substance—it's called gamma globulin—is usually enough to give a child immediate protection against measles. In cases when measles does occur in spite of the treatment, the attack is far milder than it would otherwise have been.

But let's get a few things straight about gamma globulin. It cannot give your child permanent protection against measles. It can't protect him for a year, or even a couple of months. Gamma globulin is effective for about three weeks, and it will work only if it is given within eight days after the child has been exposed. However, there's no limit to the number of times gamma globulin can be used. A baby who's protected by it during an outbreak in March, can be protected again in June. Gamma globulin can go on shielding him against measles until he's old enough to beat off an attack without any outside help. Its job, then, is simply to postpone measles until the child has passed the dangerous age for this disease.

If you have a child less than 5 years old who has been in direct contact with a known case of measles—ask your family doctor about giving him gamma globulin. Through city, county or state health departments, doctors can obtain gamma globulin free for all children under 5 who've been exposed to measles and for all others who might not be able to "take" an attack of measles. Don't bank on the chance that your child will be lucky enough to escape measles, while other children in the neighborhood are catching it. Measles is one of the fastest spreading of all diseases.

Perhaps the main reason measles travels so quickly is that its early symptoms are so deceiving. If the first sign of the disease were the telltale red rash, it might not be nearly as catching, because most mothers would quickly put the sick child to bed and keep him out of circulation. But measles doesn't start with the rash—for the first few days, it masquerades as a cold. The child is likely to have a running nose, a cough and some fever. Not until four or five days later, when the rash appears, would a mother be apt to suspect what's wrong—but the catch is that it's at the beginning, during the "cold" stage, that measles is the most highly contagious.

It is said that almost all the people in the world are susceptible to measles. You can't catch measles more than once, however, even though some people say that they've had it twice or three times. But it is a safe guess that most people do catch it once. In one epidemic in a group of islands near Scotland, only one thousand out of a population of seven thousand did not catch the disease. And during a disastrous outbreak in the Fiji Islands about seventy-five years ago, more than a quarter of the people on the islands were killed by measles or its after-effects during a space of three months! The victims were people of all ages, from the youngest babies to the middle aged, and even men and women in their eighties.

Nevertheless, most people call measles a childhood disease; some one once named it the "king of childhood diseases." But measles plays no favorites. It isn't partial to one group and hostile to another. It will attack any one, if it can. However, there is some truth to the name "childhood disease." In a crowded, congested area where large numbers of people are herded together in schools, movies and subways, it's almost a sure thing that a child will be exposed to measles long before he's grown up. There's too much measles around for him to escape exposure for long. But in rural regions or remote parts of the world, it's quite a different story. There, the chances of catching measles are much slighter, because contacts are few and far between. Many grownups who live in isolated regions have never had measles. As soon as large groups of country bred people are packed into a congested area, however, measles can spread like a forest fire. That's just what did happen in army training camps during the first world war. Measles swept the camps in a great wave, singling out almost all the soldiers who came from isolated rural regions. Soldiers from cities and large towns escaped untouched —they had had it years before.

For the past 1,200 years—if not for centuries longer—the red rash of measles has broken out in cities and hamlets from one end of the world to another. Measles is found wherever man is found; it travels as fast as man does. The cause of measles is a minute organism called a virus, one of the tiniest living things there is. The smallest objects you've ever seen—the point of a needle, a speck of dust floating on a sunbeam —are about the size of the Empire State Building compared to the measles virus. But though this virus is so tiny, we know that it doesn't do things in a small way. Every mother is pretty sure to meet up with measles at least once, especially if she has several children. And when that happens, it will probably be her job to take care of her child until he recovers.

Before she starts her job of home nurse, she should make sure that her patient really has the measles. She shouldn't jump to the conclusion that it's measles just because the child has a rash. Red spots are the mark of other diseases too. Before a mother starts making her own diagnosis, let her remember that even doctors confused measles with smallpox until late in the eighteenth century. *(Continued on page 948)*

A NEW

In the mountain regions of Kentucky, children today are learning about disease prevention and good health

By DOROTHY S. TOWLE

NEW hope has come to the mountain regions of Kentucky, to the backwoods of Florida, and to the farms of Vermont for children who have been raised on a diet of fat pork, potatoes, corn meal, and coffee.

For children who have suffered from rickets, dysentery, pellagra; who have had bad teeth, malformed bones, and skin diseases; whose minds have been dulled by inadequate diet and improper living conditions, there is now a brighter future. Today, the children are learning what to eat, and how to raise proper food on land that has been worn out with successive crops of corn and potatoes, or land that has never been used at all. They are raising chickens and goats, planting fruit trees and berries, raising gardens, and learning to can and store vegetables for winter use. They are learning about sanitation, and about repairing their homes. They are learning about disease and its prevention. They are learning to make and repair their own clothes, and learning how to buy wisely. They are eagerly meeting their own economic problems and trying to solve them. They are learning all these things in school.

In the place of outdated, dogeared text books, which evaded or failed to recognize the community problems, these children are learning to read and write and do arithmetic from delightful books about children who live and think as they do. In place of the old-time readers that have no relation to their living, the Kentucky mountain children are learning about fruits, milk, and vegetables in books written just for them; the Florida children are learning how to repair their homes, and the Vermont children are learning how to take care of their clothes. The upper grades in the Kentucky schools are studying about chickens and goats; in Florida they are learning about native shrubs and fruit. These books are used for reading and arithmetic, for geography, for health and for science. They are part of a new design for living. Here is how it came about:

For many years educators have been troubled about the discrepancy between scientific knowledge and its practical application. Thirty years

ago in an attempt to get scientific knowledge before the farm people, the General Extension Service was formed. No one can doubt the tremendous influence it has had, yet many people still remain untouched.

Harold Clark, Ph.D., of Teachers College, Columbia University, had been studying the problem of getting scientific knowledge to the rural people, and wondered whether it wouldn't be possible to use some of the methods of the social scientist to bring it about. It was his opinion that all the planning for America of the future, all the lurid advertisements, the extravagant promises, would not result in a better-fed, better-housed, and better-clothed America unless the rural people were reached.

He concluded that the best way to reach the low income groups would be through the schools. He believed that children would be more receptive to new ideas than adults, and that by working through the schools, it would be possible to set up an experimental and control community to measure results.

In 1939 Dr. Clark went to the Alfred P. Sloan Foundation of New York with these questions:

What would happen if you took a community where the diet is inadequate and gave the people all the available information on food and nutrition?

Are people malnourished because they don't know what to eat or because they don't know how to use the information they have?

Will going over what they already know again and again make it a part of the individual, and result in an improvement of the community?

The Sloan Foundation expressed immediate interest in the questions, and began what is now called the "Experiment in Applied Economics."

The experiment with diet was to be undertaken, with the cooperation of the University of Kentucky, in the mountains of that state where the diet had been very bad. It took two years to make a survey of the experimental and control community because the investigators first had to win the confidence of the people. They had to convince the mountain folk that the purpose of the experiment was to find ways to make them healthier.

The results of the survey soon made it apparent that these people were malnourished because they did not know how to help themselves. Vegetable gardens were rare. Those that were planted were small, and poorly cared for; rotation of crops was unknown, and no attempt was made to preserve or store food for winter use. Fruits were almost entirely lacking in the diet, and eggs and milk were used by only half of the people. The children had nutritional diseases; the men and women were old long before their time.

Many of the one-room schools in the mountains had untrained teachers. A few places had ambitious young teachers, who were hampered by state text-books, cast-off from more prosperous communities and totally unsuited to their needs. The children went dutifully to school, but were dull and listless, with nothing to capture their imagination or hold their attention.

The most promising teachers from these poverty-stricken communities were brought to the campus of the University of Kentucky. There, the purpose of the experiment was explained, and their help enlisted in preparing the way for a new type of education. It did not take long for the investigators to realize that they would have to supply specially written books. From the first grade up there were no texts available which centered on the raising of food for small farms. The teachers were asked to write the books themselves. None of the teachers were trained writers, but the investigators knew that an understanding of the children and the community was more important than literary skill. With the help of the experiment station and university experts, the teachers wrote a series of simple and charming books. Crudely illustrated with pen and ink, they told about the Smith family who laid out their farm, raised a garden, bought goats for milk, and kept bees for honey. They wrote about John and his chickens, about Tim and Jerry and their strawberry bed. The books were tried out in the one-room schools. No longer did the children have to read haltingly about China and Japan, about the monetary system, about things outside their experience.

The new books caught on immediately. The children were interested in the Smith family whose home and problems were so much like their own. And those skeptics who had felt that reading and arithmetic could not be taught this way were forced, in a short time, to admit that the children read better, and had made better progress in other subjects.

From this small beginning, with the classroom reception of the books assured, the teachers were branching out. If the books were to be regarded just as read- *(Continued on page 928)*

design for Living

Home Nursing for DOCTORS

INCONGRUOUSLY gowned in nursing aprons and beruffled gingham borrowed from their wives, the doctors eyed the nurse expectantly.

"Now," she said, "we'll make some doughnuts."

Members of the class picked up their instruments, which turned out to be a handful of old stockings, and, under the supervision of the Red Cross home nursing instructor, carefully rolled them into doughnut shaped rests for preventing bedsores.

The doctors, all members of the American Red Cross Medical and Health Service, were students of Miss Ida M. MacDonald, R.N., in the new home nursing course, "Six Lessons in Care of the Sick." This streamlined home nursing course was developed by the Red Cross with the aid of the Training Within Industry Service of the War Manpower Commission. Based on demonstrations and "practice, practice, practice," the course emphasizes how-to-do methods.

"I want you to see just how much a mother or any other lay person can learn in these few lessons," said Miss MacDonald, "and how much time she can save you on your calls." She pointed out, too, that patients could be released earlier from hospitals, or a private duty nurse might be relieved sooner on a case, if some one in the home had taken home nursing.

The doctors proved apt students at carrying out nursing orders. They took temperatures, kept daily records, gave bed baths, changed linen with the patient in bed, and practiced procedures for steam inhalations, enemas and hot compresses.

"I've ordered lots of hot packs," groaned Dr. Courtney Smith, Deputy Medical Director of the Red Cross, "but I never knew they took so much time."

Dr. Dean A. Clark, Red Cross Medical Survey Officer, thought that home nursing courses should be taught in colleges and universities as "an invaluable aid to medical and dental students." Every doctor should know, he said, how a home nurse can learn to report by telephone, carry out orders and make the doctor's skill count most.

In addition to the short course taken by the doctors, the Red Cross also offers a standard twenty-four hour course and a high school course. A college course is also in preparation. Classes are taught by nurses who meet American Red Cross qualifications in both professional and general education. The Red Cross Home Nursing textbook is the basic text for adult courses and also serves as a permanent reference book in the home.

Others in the course, Dr. John B. Alsever, Director of Civilian Blood Donor Service; Dr. Caroline Helmick, Assistant Medical Director for Eastern Area, American Red Cross; Commodore Wilbert E. Longfellow, Assistant Director of Water Safety; and Anna M. Gerard, secretary of the Medical and Health Service, stressed the importance of training men as well as women.

"If mother is sick or has too much to do, the role of homemaker is sometimes reversed. Papa often has to pinch-hit in a family emergency," said Commodore Longfellow.

With the risk of epidemics an ever present danger in crowded cities and towns, the home nurse can do much to prevent widespread illnesses by recognizing early symptoms of communicable diseases. Knowledge of how to isolate and care for those cases is health insurance for the entire community.

The doctors expressed surprise at the ingeniously devised home equipment made during the classes—a steam tent out of an umbrella, back and foot rests from cardboard boxes, bathtowel shawls and blanket bathrobes. Only materials commonly found in every home were used. "No trick equipment is needed here," said Dr. Alsever.

The little attentions of nursing care which cheer up a convalescing patient are taught as well as nursing skills. Hair brushing and manicures keep the patient well groomed and trim. One of the little extras patients enjoy is a good back rub. The doctors in the class vied for the honor of playing patient when the correct method of back rubbing was demonstrated. The patient, Dr. Clark, contentedly submitted to the skilful hands of Dr. Smith for the practice session.

The home nursing course differs from the Volunteer Nurse's Aide course, which is designed to prepare women to assist professional nurses in caring for illness in hospitals, clinics and dispensaries. Purpose of the home nursing course is to "help the home help itself" in the

practice of simple nursing procedures. With hospitals overcrowded and understaffed it becomes urgent that home nursing instruction reach as large a number of homes as possible. "The basic job of keeping Americans healthy must be done in the home," declares Dr. Thomas Parran, Surgeon General of the United States Public Health Service.

Last year more than 3,000 American Red Cross chapters all over the country offered home nursing as a part of their service, and 533,483 persons received certificates. But an estimated 3,000,000 more persons must be trained in these simple skills if adequate health protection is to be given communities during the postwar period. National studies have shown that illness may be found in one out of every ten homes in normal times, and in one out of every five or six homes during seasonal peaks of illness. Average safety in medical care can be maintained with one doctor to 1,500 persons, but that margin is considerably overestimated in some congested centers, where 2,000 to 4,000 must depend on one physician.

By providing capable assistance in homes where sickness strikes, the Red Cross seeks to help overworked doctors and nurses. Now, when a nation of healthy Americans is needed more than ever before, the Red Cross asks the medical profession to inform patients about the home nursing course. Arrangements to enroll in home nursing courses may be made through local American Red Cross chapters.

Dr. Carolyn Helmick, student in the new streamlined home nursing course, takes temperature as another student looks on

By PEGGY SPERRA

Using improvised equipment such as might be found in any home, students rig tent and give the patient a steam inhalation

Backrub often adds to the comfort of sick persons and thus aids recovery. Here Dr. Courtney Smith learns correct technic

This infantryman sustained a severe gunshot wound of the right arm, which must be kept in a cast for months. Typesetting is ideal occupational therapy

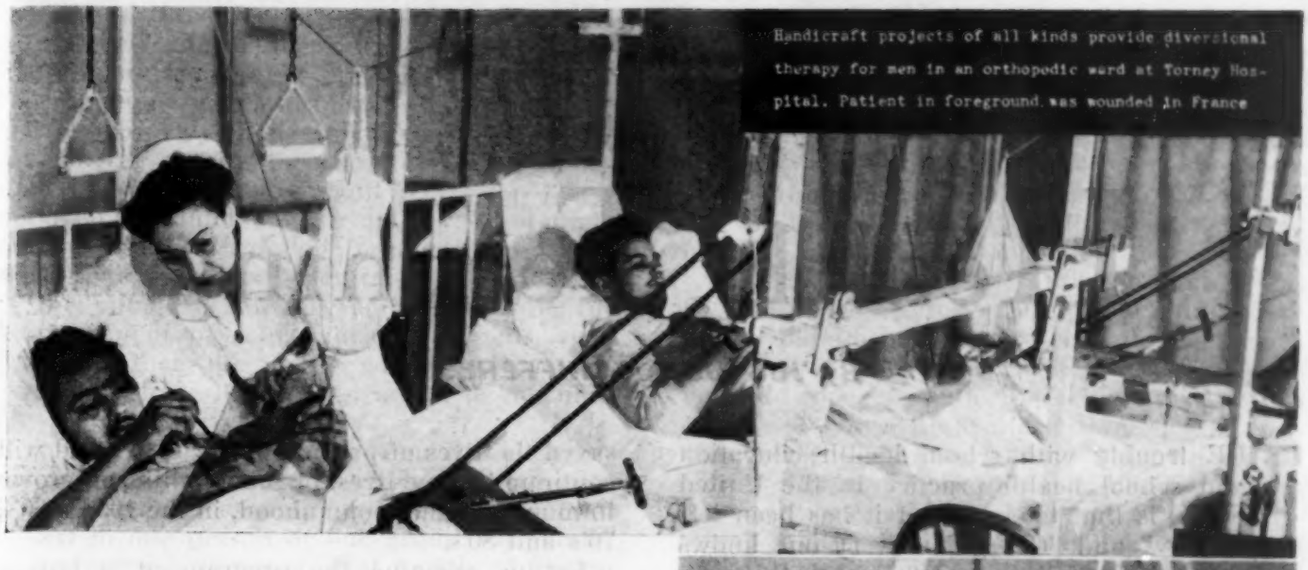
IF YOU WORK

By LT. HILDA M. HARRISON

OCCUPATIONAL THERAPY — treatment through planned and directed activity— has acquired new significance since the arrival of the first battle casualties back in the states. In years of peace the general concept of occupational therapy was that it was purely diversional activity undertaken voluntarily by people faced with long hospitalization. Rarely was occupational therapy evaluated on a curative basis.

Early in 1943 the Army Medical Department began the expansion of its occupational therapy section. A year later the Surgeon General's Office announced a federally financed emergency training course in occupational therapy and began to train qualified young women to staff the

Normal flexion and extension of right elbow is aim of this man working at table loom. His compound comminuted fracture resulted from 88mm shrapnel wound

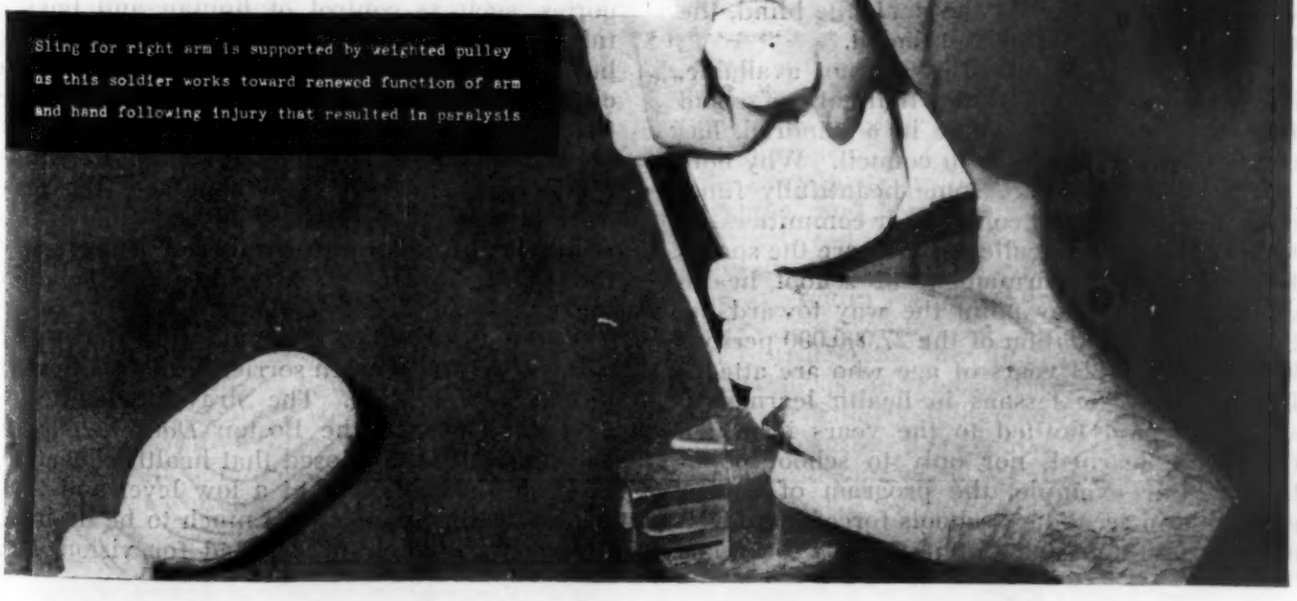


Handicraft projects of all kinds provide diversional therapy for men in an orthopedic ward at Torney Hospital. Patient in foreground was wounded in France

—YOU WIN

Army's sixty-three general and thirteen convalescent hospitals. Confining its demand to one therapist for each 250 patients (registered occupational therapists in the nation still number less than 1,500), the Army nevertheless has set up a comprehensive program divided into four definite classifications—functional, diversional, industrial and pre-vocational.

Army hospitals—whatever their specialty—have the population characteristics of small, heterogeneous towns housing a cross section of America. Implements of war recognize no social distinction, no race, no creed; in combat and in military hospitals men are grouped together without consideration for background, education or aptitude. *(Continued on page 951)*



Sling for right arm is supported by weighted pulley as this soldier works toward renewed function of arm and hand following injury that resulted in paralysis

How to Improve

Health Teaching

By JUSTUS J. SCHIFFERES

THE trouble with school health education and school health practice in the United States is that too much of it has been left to "Harvey" and "George." Every one knows George; he's the fellow we let do everything we are willing to let slide. "Harvey" may be less familiar to people who have not yet seen the stage play, Broadway hit of the season, which goes by the same name. "Harvey" is a six-foot white rabbit who simply isn't there. (In the play, he's the imaginative companion of a delightfully gentle but deranged soul named Elwood P. Dowd.)

Thanks to Harvey and George, the people of the United States are passing up at least 95 per cent of their 275,000 best opportunities for health education in its widest and most fruitful implications. That big number is not picked out of thin air; it is the number of schools in the United States as reported by the U. S. Office of Education. Most of them, approximately 90 per cent, are elementary schools; indeed, many are tiny, one-room schoolhouses. They should not be excluded from consideration, as we shall demonstrate later, simply because they are small and predominantly rural. As for the rest of the total, it includes approximately 29,000 high schools; 1,700 colleges, universities and professional schools; and a certain number of nurse training schools, private commercial schools and schools for the deaf, the blind, the delinquent and the feeble-minded.

Though accurate statistics are not available, it is probably safe to estimate that not one school in twenty, possibly not one in a hundred, has a functioning school health council. Why not?

Of course, there are some beautifully functioning school health councils, or committees, as they are sometimes called. They are the sparkling stars in the firmament of school health education, and they point the way toward the firm health foundation of the 27,000,000 persons between 5 and 24 years of age who are attending school. The lessons in health learned in school are not limited to the years in which they were learned, nor only to school population. For example, the program of cancer education in secondary schools forcefully developed in Westchester County, New York, has saved the lives of parents in the 1940's and will continue to save lives, of school children grown to manhood and womanhood, in the 1950's, 60's, 70's and 80's.

Let us examine the program of a typical school health council and discover why this comprehensive medium, mechanism or method of school health education seems most likely to solve an admittedly difficult but needlessly neglected set of problems. In Minnesota, on one of the bays of that lovely body of sky blue water called Lake Minnetonka, there is a village called Mound. In this village is located an attractive consolidated school which draws approximately 1,000 pupils from an area of approximately 99 square miles. The school operates twelve buses and employs about sixty people, including teachers, drivers, cooks and custodians. The Mound Health Council is quite young. Its first meeting was called on Sept. 18, 1941, by the superintendent of schools. Why was there no health council sooner? The superintendent offers a curious reason:

"It has only been within the last few years that the civic minded populace would admit the need of a health program, our natural environment being so conducive to physical and mental well-being."

It is true that Minnesota has established excellent health records in many measurable categories, such as control of human and bovine tuberculosis and low records of maternal deaths, but such accomplishments should persuade a civic minded populace and its board of education to more, not less, organization for health improvement. It is interesting that the traditionally most civic minded populace—the residents of Los Angeles—have given support to a school health program so elaborate as to justify the publication of its own health education journal.

At the other end of the country, in the city of Boston, we find a much sorrier and already well publicized condition. The Strayer School Survey, published in the Boston *Daily Globe* in November 1944, disclosed that health education in Boston schools was at a low level and that school health practices left much to be desired. Children had their eyes tested for vision, but

in some of the older school buildings the lighting, natural and artificial, was woefully inadequate. Children studied nutrition, but the lunchroom menus were lush with carbohydrates. Once so bravely pioneered in Boston, laments the Strayer Survey, the areas of health education, physical education and recreation "have not been maintained at the high level that might be expected." If the civic minded populace of Boston had emulated, even in 1942, the citizens of the village of Mound, and insisted on the establishment of school health councils, it is probable that the city's educational record would not have been blemished with the findings of the Strayer Survey.

The keynote of the health council is cooperation. Health education is such a broad field of teaching, service and conduct that it cannot be left to one person or one group. It should be understood, however, that health education is not synonymous with health instruction, direct or indirect, and that the basis of sound health education and service is the fund of medical knowledge possessed and advanced by the medical and public health professions.

When the Mound Health Council was organized, it included the superintendent of schools (who took the initiative in forming it), local physicians and dentists, the principals of junior and senior high schools, two representatives of the Parent-Teachers Association, physical education teachers, a representative class room teacher from the elementary grades, science and home economics teachers from the junior and senior high schools, a student representative from the student council, a janitor and a school nurse. Soon it became apparent that a representative of the Board of Education and a school cook ought to be added to the membership!

The objectives of the Mound Health Council were stated as being:

1. To coordinate the activities of all departments interested in health.

2. To assist in planning for such health activities as a healthful school environment; a planned program for the care of accidents and sudden illness at school, and for prevention and control of communicable disease; a graded program of health instruction; periodic health examination and cumulative records; a follow-up procedure to guide pupils and parents to sources of medical and dental treatment.

3. To assist in keeping the community abreast of health knowledge.

These objectives were kept well in mind in the functioning of the health council. These are some of the things the council did: It cooperated in a community plan for protecting all children against smallpox and diphtheria. It explored ways of using health services, notably the health examination, so that pupils, parents and teachers (often present at examinations) derived the maximum educational benefits from it. It studied the nutritional needs of the children and discovered what teachers were putting this subject across in the most interesting manner. It studied the health curriculum of the school and suggested changes and improvements. It invited interesting speakers, such as the superintendent of dental health education of the State Board of Health, to visit Mound and keep the community abreast of the best professional opinion on health topics. And, best of all, the health council itself learned as it went along.

After three years of operation the Council was able to conclude, for example: (1) that there was a definite need for coordination of health activities; (2) that curriculum changes were needed properly to allocate subject matter in a schoolwide curriculum of constant health education; (3) that there was an urgent need for teachers trained in health instruction; (4) that a school nurse could make her greatest contribution in home visits and assisting in the training of teachers, and (5) that the health council itself was needed to promote school-community relationships.

These are modest enough conclusions. The important thing is that Mound found them out for itself, through cooperative discussion and practice within the framework of the health council, and in finding them out made Mound, salubrious as it was before, an even healthier place to live and bring up a family.

Mound and Minnesota are not alone in developing and planning for the school health council, though it is true that they are far ahead of the parade. Marching closely abreast is the state of Illinois, whose joint committee on school health, under the leadership of the director of the department of public health, the superintendent of public instruction, the director of the department of registration and education, and distinguished consultants, has recently published a cogent basic plan for health education and the school health program. This publication lists 167 specific objectives of health education which might well be on the agenda of any functioning school health council. There is plenty of work for any school health council to do if it achieves only a fraction of these aims, which range from the most trivial to the most sweeping.

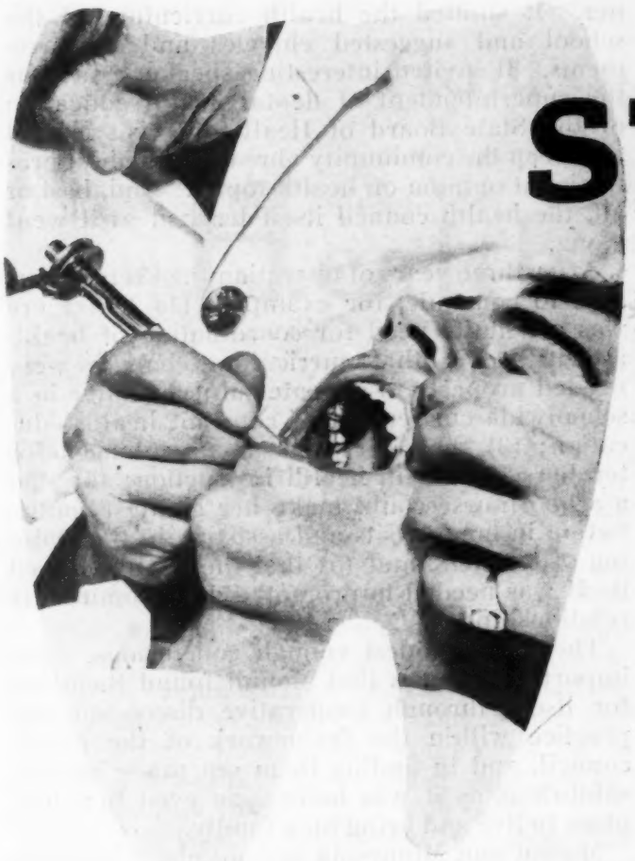
Here are a few of the objectives that each child should realize as the result of an adequate school health program which extends into the home:

Be examined specifically for rheumatic involvement and cardiac disability from time to time between routine health examinations—especially in connection with athletic programs.

Be tuberculin tested at suitable intervals and x-rayed if necessary.

Be instructed not only in general health terms but also in specific characteristics of certain diseases, particularly tuberculosis, syphilis, other infections, infestations, nutritional deficiencies, endocrine disorders, heart disease, cancer and renal disease.

Learn the basic facts concerning the functioning of the body as a *(Continued on page 958)*



STAY DENTALLY FIT

By LON W. MORREY

THE young man at the end lathe grinned broadly and shouted joyous greetings to a group of fellow workers who had gathered in his department to welcome him back to his old job.

"What do they do in the infantry, Georgie?" one of the older men called out, and every one laughed. They were happy to see George back on the job and looking so well. He'd seen plenty of action during his three and a half years of army service.

George did look well, and he felt well, too. When he rubbed his hand over the familiar lathe that first morning, he had considered himself the luckiest fellow in the plant. There'd been countless times in the past three years when he'd thought that he wouldn't be able to take advantage of the offer the factory superintendent had made to him the day he had left for military training. "Your job will be waiting for you, George," Mr. Johnson had said. I'll be back," George had promised boastfully. And he had come back—despite the intervening bombs, tanks, grenades and machine gun bullets.

Many of the employees who had known George in his prewar days remarked happily that he hadn't changed a bit. "Just the same old George," they said. But in three years, people often forget exactly how a person did look.

If they had been observant, they would have noticed one important change in George the moment he flashed his broad grin and shouted "Hi, folks!" George never used to grin. He smiled, of course, but he never showed his teeth.

The reason? George Miller hadn't been dentally fit before he entered the service at the age of 21. Two teeth in the front of his mouth had been broken off during a football skirmish in his high school days and had never been properly treated. One tooth on the right side of his mouth had been extracted as an emergency treatment for a severe toothache and had never been replaced. Many of his teeth were badly decayed.

The eldest of nine children, George had been "on his own" ever since he could walk and feed himself. There hadn't been much concern about well balanced meals in the Miller home. There'd been enough food, of course, but as Mrs. Miller told her neighbors resignedly, "My children only eat what they like." And George especially liked sweet foods and soda pop.

No one had insisted that George brush his teeth twice a day. If his mother had told him to do so, George would have considered it a violation of his personal liberty.

Dentists were anathema to the whole Miller family. Parents and children visited a dentist only when forced to go because of severe toothache.

Yet, like most people who have neglected, unclean mouths, George was self-conscious about his teeth. He demonstrated his embarrassment by the way he kept his lips closed over his teeth when he talked or smiled. It gave his face a stiff, unnatural appearance. Some people thought he was trying to be tough when he talked out of the side of his mouth.

When George reported for his physical examination before induction into military service, the dentist who examined his teeth voiced his criticism of their obvious neglect. George had had to swallow his indignation that time. It was a new experience for him—one that was repeated frequently during his three and a half years in the infantry. *(Continued on page 956)*

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FEEDING PRESCHOOL CHILDREN

By BERNARD S. DENZER

THE principles governing the feeding of children of preschool age, from 2 to 6 years, are essentially the same as those applicable to other ages—the provision of adequate total amounts of food in proper proportions (proper amounts of protein, carbohydrate and fat, minerals and vitamins) and administration of the food according to methods suited to the needs of a growing personality. While scientifically the total quantities of food are usually expressed in terms of calories, it is simpler and clearer to think in terms of the usual household measures, and that method will be adopted in this article.

Relatively, children need more food than adults; one must add about 10 per cent to their food requirements to cover the needs arising from rapid growth. Besides that, children differ in build and activity. Some are like longshoremen or woodsmen and require a laborer's diet; others are like sedentary office workers. The nutritional needs of a Babe Ruth differ from those of Lord Halifax because the physical activities, mental interests and emotional lives of the two men are different. Similarly, the food needs of an active, daredevil, mischievous boy differ from those of a quiet, retiring little girl.

Although there are few foods that are purely protein, certain foods are depended on as the chief source of supply for proteins—milk, the meat foods, cheese and eggs. Some dietitians insist that every child should drink a quart of milk a day. Some children can do so without interfering with other elements of their diet. Other children find a quart of milk too much. Many physicians believe that a pint of milk is adequate, and an effort should be made to supply that amount. By meat food is meant not only beef and lamb but also chicken, bacon and fish, such canned fish as sardines, salmon and tuna fish, as well as the bland fishes, such as cod, weak and white fish, and also liver and the other internal organs of animals, sweetbreads and kidneys. A meat food should be given once a day, and egg and cheese may be given on the same day. Butter or a reinforced substitute, about three good sized pats, will adequately supplement the fat in foods.

Carbohydrate or starchy food supplies material for energy and is to be found particularly in cereals, bread, potatoes, rice, fruits, puddings and the garden vegetables. One cannot group all these foods together merely because they supply carbohydrate, nor are they all equally valuable. Thus the whole wheat or brown cereals and many of the synthetic reinforced cereals are rich in minerals and vitamins. Fruits also vary in value; fresh fruits in season are preferable to stewed fruits.

Many of the foods that supply calories, providing energy for the bodily machine, particularly milk, eggs and vegetables, are also rich in vitamins and minerals. They have been called protective foods. It is wise to accustom children to a wide variety of vegetables, because it is difficult to obtain a good distribution of the vitamins and salts from only a few vegetables. Thus carrots are rich in vitamin A and contain some vitamin B, and tomatoes are rich in vitamin C and also contain vitamin B, whereas neither one falls into the group known to be high in iron. Therefore, to supply a good distribution of minerals and vitamins, a generous variety of vegetables should be given.

The vitamins have provided an arena for bitter dispute. A few physicians believe the vitamins found

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WHEATLESS FLOUR MIX

Preschool Children

(Continued from page 922)

in a well balanced diet are adequate. On the other hand, the claims of commercial firms selling vitamin preparations over the radio are grossly exaggerated. The truth lies in between. Vitamins are not magic chemical wands that will endow you and your children with health and beauty and ward off illness. They are cogs in the wheels of the complex human factory, just as proteins, fats and carbohydrates are. Some of the functions of vitamins are fairly well known, while others are not. Men are quietly and laboriously studying the functions of vitamins; you may never hear their names on the radio, but they are contributing to your child's health.

Fortunately, vitamins are harmful only if they are given in very excessive amounts, a thing which is not likely to occur. I believe that vitamins should be given in addition to the amounts found in an average diet, but a child does not need to take all the vitamins in drops or pills. For example, oranges, an almost universally eaten food, will supply sufficient vitamin C if the juice of two oranges is taken each day. Your own doctor can tell you whether or not your child needs extra vitamins, and if so what amounts are needed.

Often mothers ask, "How much should my child eat?" This is a very proper question, and not always an easy one to answer. The amount of food needed varies with the build and activity of the child and the rate of growth. I should say that between 2 and 6 years of age a child should consume at least a pint of milk and one egg a day; the equivalent in meat food of one lamb chop; a bowl of cereal; a saucerful of vegetable and an equivalent amount of raw salad; three pats of butter or a butter substitute; the equivalent of one-half grapefruit or a banana; a small potato; three slices of bread; and a tablespoon or two of cheese.

It is extremely difficult to be positive or accurate about the caloric value of groups of foods. Particularly among vegetables, the variation in food values is wide. Thus an ounce of peas has five times the caloric value of an ounce of tomatoes. Too, the food value of a food may be altered tremendously by the way it is served. As a simple example, compare a saucerful of cereal covered with a little milk with the same amount of cereal served with cream, butter and sugar. One may almost double the caloric value by the addition of sugar, butter and cream.

Whether or not your child's diet is satisfactory may be determined by comparing him to certain standards of nutrition. These, like most biologic standards, are only approximately accurate. The simpler standards are those that refer to the weight of a child of a given age and height. In general, a weight within 7 or 10 per cent of this standard is considered to be within normal limits. Of course, such standards do not take the child's build into consideration. Here again we must consider the Babe Ruth type as contrasted with that of Lord Halifax—the thick and heavy compared to the long and thin. It would be illogical to expect Babe Ruth and Lord Halifax to weigh the same or to pass judgment on their nutritional state on the basis of weight alone. The standards used by most physicians take these differences in build into account. But, inaccurate as standards are, it is still worth while to check your child from time to time and estimate to what extent he measures up to them.

The provision of food involves more than merely supplying calories and vitamins. Food should stimulate the appetite. Children's food should be seasoned and tastily served. Too frequently it is flat. Often mothers ask whether or not salt may be added to food. Of course it should be added! Failure to add seasoning to food leads some children to eat dirt, chew on matches or bite paint from cribs and toys in an unconscious effort to satisfy the need for new taste experiences. Salting and seasoning food may break this habit.

An unjustifiable prejudice against fried food exists in the minds of many mothers. Only food fried in deep fat, such as French fried potatoes, should be eliminated from the child's diet. Variations in the preparation of foods stimulate appetite. Take eggs, for example: The coddled egg may be replaced by scrambled, shirred, poached or fried eggs or the many varieties of omelettes and souffles. Cooking is a major element in the preparation of food for John Junior, just as it is for John Senior. When John Senior growls at his plate, leaves most of the food untouched and grabs for his paper, the wise woman does not discourse on the virtues of calories, but goes into a huddle with her cook book and her intuition to find some other solution. Similarly, John Junior appreciates sweetening, seasoning and variation, possibly he may be a conservative in food, wishing to see the same thing served in the same way every day. At any rate, his individual temperament and tastes should direct your efforts as long as they do not involve harmful foods or bad habits.

The problem of lost appetite is almost universal. One of the most frequent complaints expressed by the mother in the doctor's office is, "My child refuses to eat; he just has no appetite." What simple, direct measures can the mother take to remedy this evil?

The first prerequisite for an appetite is an empty stomach. It takes about three or four hours for food to pass through the stomach to the small intestine. Hence the child

Guardians and Fighters Against Infections

The why and how of infectious diseases and the body's resistance to them have long occupied the scientific minds of the world. What makes one person more resistant to infection than another? Why are undernourished persons so much more susceptible? Why do infectious diseases which ordinarily are rather mild, show such a rapid and often fatal course when they attack a person already afflicted with some wasting disease?

Many of these questions, which for so long have baffled medical science, appear to be finding their answer in the newer knowledge of "antibody formation." When the germs that cause an infectious disease invade the human body, the body responds by forming "antibodies," substances in the blood which attack the invaders.

For the manufacture of these antibodies and the resulting resistance to disease, proteins are needed—the body manufactures them out of and with the aid of protein. When protein nutrition has been poor, the capacity of the body to produce antibodies is severely lessened.

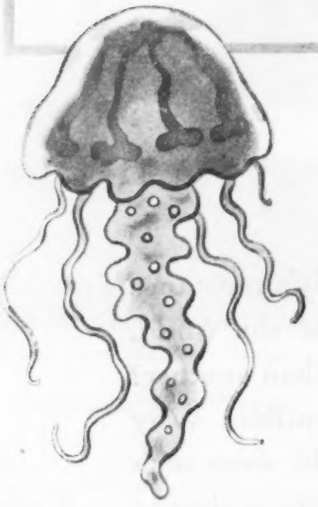
For his protein supply man must look to his daily diet; the foods eaten are his only source. Among man's protein foods meat ranks high, not only because of the amount of protein it contains, but principally because the proteins of meat are of such excellent quality, able to satisfy every protein need.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

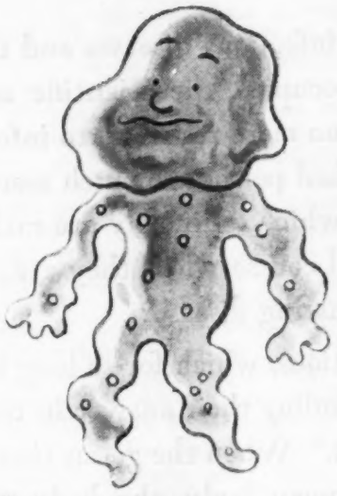
AMERICAN MEAT INSTITUTE

MAIN OFFICE, CHICAGO . . . MEMBERS THROUGHOUT THE UNITED STATES

Wish you could hand out backbones?



1. Some patients are spineless as jellyfish when you find it necessary to take them off coffee...



2. While you can't equip them with backbones, there *is* a good way to stiffen their will power about coffee. Many doctors find it helpful to suggest: *DRINK POSTUM INSTEAD*. Because...

3. With Postum to cheer them, patients find it *easy* to be upright characters and obey doctor's orders. Postum contains no caffein or stimulants.

Yet so full-bodied and hearty and downright satisfying is Postum that many people who *CAN* drink coffee without ill effects *prefer* Postum.

Postum, made of full-flavored American grains, is a product of General Foods.

Postum

ONE OF AMERICA'S GREAT MEALTIME DRINKS

without a large natural appetite for food should be fed only three times a day; there should be no in-between feedings of any kind. Breakfast should be given as early as possible and supper just before retiring, with luncheon at midday. For the child who refuses to eat, the portions should be particularly small. The feeding period should be restricted to about one-half hour. If the child refuses to eat, then the food should be removed and nothing should be given until the next regular meal. This should be done in a quiet, unemotional fashion. Begging, coaxing, urging, threatening, spanking, playing games and distracting attention with the radio must all be eliminated. The mother's part in this procedure must be firm, friendly and detached. The disappointment to the mother of the child's refusal to eat should not mar their other relationships. In the vast majority of cases, this simple method will result in improvement in appetite.

The basis for the success of this method rests on an orderly and disciplined household. The child who is alternately pampered and scolded, and bribed to do each duty, whose routine of life is disorderly and irregular from awakening in the morning to bedtime at night, cannot be expected to behave properly at mealtimes.

Certain feeding programs may be an aid in accomplishing these objectives. Thus it is known that carbohydrates, or starchy foods, pass through the stomach more rapidly and are more easily digested than fatty meals. On the other hand, foods that have little nutritive value compared to their bulk, such as clear broths, might better be eliminated.

At this point it may be worth while to call attention to the mid-afternoon snack. For the healthy, active youngster whose appetite is good and whose lust for supper is not spoiled by a 3 p. m. feeding, such a mid-afternoon meal is harmless. It is questionable, however, whether or not it is advisable for the whole childhood population to indulge in the daily ice cream meal in mid-afternoon. Ice cream is a rich food that does not pass through the stomach rapidly. If a child must have an afternoon snack, fruit serves the purpose of satisfying hunger without spoiling the appetite for the evening meal.

Much has been accomplished by science in the proper feeding of children. In my childhood, the rickety, bow-legged child was a common sight. Today that is a rarity. Yet the relative ill health of our young manhood as indicated by the failure of over a million men to measure up to Army standards is cause for concern. Now as never before the world and our country need sound girls and boys. As physicians and parents, we must dedicate ourselves to the task of laying a good nutritional foundation for sturdy growth.

PRE-SCHOOL CHILDREN NEED AN AFTERNOON NAP

By Meredith Moulton Redhead, Ph. B.
Baby Food Counselor of Heinz Home Institute

ALTHOUGH a child's capacity for sleep varies as much as his capacity for food, most babies willingly accept an afternoon nap as part of their daily routine for the first few years. But between the ages of three and five a rebellion may begin! In this case pediatricians recommend that the child be put to bed and encouraged to rest, even if he fails to fall asleep. A simple toy or book will not only keep him quiet but may lull him into slumber. This routine should be pursued at least until your youngster enters school.

Giving baby the proper foods as well as the proper amount of rest his age requires, is equally important. Heinz Baby Foods—Strained and Junior Foods—are scientifically designed to give him necessary nutritive values from cradle to kindergarten. And they have the kind of fresh, delightful flavors he'll really relish!

Notice the difference in flavor, color and texture of—

HEINZ BABY FOODS

MADE BY H. J. HEINZ CO., MAKERS OF QUALITY FOODS FOR 76 YEARS

Question Box on Baby Feeding

By Meredith Moulton Redhead, Ph. B.
Baby Food Counselor of Heinz Home Institute

1 QUESTION: Is variety important in a small baby's diet?

ANSWER: Positively—*yes!* Babies are, after all, people. And like adults, they tire of food served repeatedly. Yet since they are unable to express their disapproval intelligently, they often show their dislike by refusing all food for a time! Then you'll find that variety in the day's menu—as well as day-to-day menu changes—will break down the child's resistance to food. Among Heinz Strained Foods you'll find plenty of variety—meats, fruits, vegetables and desserts—to keep any baby interested in eating. What's more—Heinz Strained Foods are scientifically cooked and packed within *hours* of harvesting—to capture flavors babies *like*.

2 QUESTION: How can a child's immunity to winter colds be built up?

ANSWER: Consult your doctor or family pediatrician on the necessary precautions to ward off winter colds. He may recommend special cod liver oil or vitamin concentrates. But in any case, he'll tell you to follow a sound routine of fresh air, exercise, sleep and the right *food*. When you give baby Heinz Strained Foods, you can rely on their nutritive value. For they're prepared according to the latest and finest methods—in order to retain a high degree of *vitamins* and *minerals*. And they're constantly checked by nutritional experts in Heinz Quality Control Department to make certain that their color, flavor, texture and food value are up to Heinz high standards.

3 QUESTION: How can more milk be introduced into a toddler's diet?

ANSWER: Often older babies get so interested in solid food they turn up their little noses at milk. If this is a problem at your house, see that your child drinks milk with his meal, while still hungry. You can give him *extra* milk, too, by feeding him soups made by combining Heinz Creamed Green Vegetables, Creamed Diced Vegetables and Chicken Farina Vegetable Porridge with extra milk. Heinz Junior Foods, you know, are those delicious intermediate dishes specially prepared to give older babies the heartier nourishment they need. Rely on these chopped, highly nutritive foods to furnish a well-balanced menu for *your* youngster.

57

Come and Live in Sunny

ST. PETERSBURG

Why not plan to live where the climate is pleasant all the year, where you can spend your days in the sunshine enjoying your favorite form of recreation, where you can grow flowers every month, pick oranges and grapefruit from your own trees—in short, where life is as you like it?

This is the appeal of sunny St. Petersburg, largest resort-center and finest home city of Florida's Gulf Coast. Hundreds of families have come to this community in recent years to make their homes here. St. Petersburg offers them what they want—a combination of climate and living conditions that have few equals anywhere.

St. Petersburg has splendid schools and churches, fine public institutions of all kinds, an efficient council-manager government, moderate living costs, a superior health record, and thousands of beautiful homes in every type of setting. Find out about St. Petersburg. Write today for our illustrated booklets. Address G. R. Davenport, Chamber of Commerce.

St. Petersburg
FLORIDA
THE SUNSHINE CITY

A New Design for Living

(Continued from page 913)

ers, then the experiment had failed. It was necessary to dramatize the material in the books, to interest the children in actually doing the things they were reading about. This was done in a number of ways. Lurline Willoughby in the Lynchtown school in Estill County, Kentucky, had her children lay out a garden in a sunny and well-drained spot in the school yard. During the dry weather they carried water for it, and when rabbits began to nibble at their plants, constructed rabbit traps similar to the ones described in the reader. They raised the first soy beans in their section of the county, and proudly exhibited them on the science shelf for parents and friends to see. The teacher at the Gray Hawk school prepared one hot dish a day, and furnished milk to supplement the corn bread and cold bacon brought in lard pails from home. Soon mothers asked for the recipes of dishes their children had enjoyed at school.

Twelve-year-old Derman King in the Emby King school raised chickens, and supplied his family with eggs all winter. He told a school visitor: "Last year my hens weren't laying at all, and I got to reading those books (The Chicken Series). I told Dad that if he would get me some mash, and some yellow corn I believed the hens would lay. Then I got some roofing from the old porch, and re-covered the old chicken house. It wasn't but about two weeks till I got eggs. I had 19 hens and got as high as 12 eggs a day. I kept a record on the calendar. On cold days I would warm the water on the stove for my hens. Miss Opal, my teacher, told me to do that. It sure helped our family out last year to have those eggs. During the snow, the mill shut down and Dad couldn't work, but we had eggs to eat all the time."

Mayme Shepard, one of the teachers, had a pupil bring a pet goat to school as an object lesson in telling about the ease of raising goats and the value of their milk. Within two weeks two families in the community had goats.

As soon as the children began to do gardening at home and interested their parents in the family farm, the teachers found that there were gaps in their own knowledge, even larger than those they had found when they wrote the original texts. So as a direct result of the teaching the farm and school authorities of MacCreary county, Kentucky, and the University of Kentucky are combining in a unique experiment. They are using the farm of William O. Gilbreath, county superintendent of schools, to conduct careful tests to determine how the average farm family of the region can most efficiently produce its own food supply. The results, incorporated in a series of readers and other texts for the use of children, will embody simple directions for raising the kinds of produce and livestock which tests prove will do best locally under small-farm conditions. Thus for the first time, a series of elementary school books will give children specific information, gained from working a family farm like their own, in soil, topography, size, and climate.

The following year, 1940, the housing part of the project was started in Florida, and there as in Kentucky, a complete survey of an experimental and a control community was made. The homes of school children were investigated and found to have no running water, no refrigeration, and no electricity. The prevalence of hookworm, typhoid, and dysentery was not surprising when it was found that some homes had no toilet facilities whatever, and the majority had no better than an open surface privy. Most of the houses were too small for the number of people, were without adequate sleeping arrangements, unceiled and uninsulated, with no closets, no grass, trees, or shrubs around them.

The teachers from the schools in these backward sections were invited to the University of Florida to write housing texts for their children. For the lower grades, they wrote simple readers about the "Happy Helpers" learning to clean and keep a house properly. They wrote "Tip, Tap, Zip," a little book with excellent illustrations, on tools and their uses. They wrote the delightful "Our Beautiful Yard," which told about Betty and Bobby, and their new house, how they planned their garden, and learned about trees and shrubs. For the upper grades, they wrote books about the climate, topography, and vegetation of Florida and other parts of the south.

Now, in the beginning, the schools are doing simple things. An eighth-grade girl studied ways of making rooms more livable, and then made the first curtains she ever had, covered a chair, and painted her bedstead. At the Bardin school the second graders built an actual playhouse, which was moved out into the school yard when it was completed. The children learned that hammers and saws are not mysterious implements, but tools that any one can use. The third-graders learned to dust and sweep, to raise plants and take care of them, and to make their school room a more attractive place. Boys in the seventh grade made cement blocks for chimneys to protect their homes from fire, and boys in the eighth grade helped lay the foundation for the new addition to the school as part of their practical work.

The only way to find out just how much the children do at home, and how much influence they have on

Christmas gift!...Have a Coca-Cola

...the presents arrive from the folks at home

Faces light up, spirits lift and hearts beat faster. Santa arrives with the gifts from home. What a time to celebrate! No wonder *Merry Christmas* and *Have a Coke* are heard from all hands. Words that speak of good cheer, of friendliness, of home. Good things get around in this world and Coca-Cola is one of them—a symbol of American ways and home customs.

"Coca-Cola" and its abbreviation "Coke" are the registered trade-marks which distinguish the product of The Coca-Cola Company.

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Susie discovers the "TEETH" in a WREATH

Quick... THE IODINE BOTTLE!

A little scratch or other minor wound bids hearty welcome to infection. Don't slight it. Don't think it trivial. Don't "let it go."

Infection is serious . . . so "paint" every little cut, scrape or scratch with Iodine, a preferred and dependable germicide.

USE 2% STRENGTH FOR FIRST AID... AT YOUR DRUGGIST

IODINE EDUCATIONAL BUREAU, INC.
120 Broadway, New York 5, N. Y.

IODINE
Foe of Infection

their parents, would be to go from door to door asking questions. But the Florida workers haven't reached that point yet. They have only asked the children to report on their achievements for the year. At the Chiefland schools, each grade had some progress to report—trees set out, steps repaired, tables and chairs painted, screens repaired, and other odd jobs done about the house.

One small school in which more than 60 per cent of the boys and girls were infected with hookworm wanted to do something about that. When questioned, a few parents admitted that they had submitted fecal specimens to the county nurse, and followed up the treatment, but within the next year the children were reinfected. One mother said: "I guess there is nothing to the treatments, anyway." Neither parents nor children understood the disease or how to prevent it. A special text was prepared, an appealing story about young people in their own circumstances, who had followed up the curative measures with the preventive ones necessary to rid themselves of the disease. A miniature model of an inexpensive and sanitary privy was exhibited in the classroom, and committees from each class did their part in putting together a pit privy on the school grounds.

As in Kentucky, not all the community improvement can be traced directly to the school, but much of it can, and the actual improvement in the homes can be measured.

The third part of the project was started at the University of Vermont in 1941. Here the particular problem was clothing among the farm families, and unskilled or semi-skilled workers living in and around small towns. In some ways, the task was easier than the other two, in some ways harder. The pattern of the investigations had become established. But asking questions about clothing proved to be more difficult than asking questions about food or homes. It was hard to find how many pairs of socks or suits of underwear each member of the family had.

It was found that clothing was as inadequate as the food and homes had been in the other sections. As a result of the survey, the teachers in Vermont prepared text books, stressing the care and quality of clothes, particularly for winter. Dr. Clark visited one of the schools on a January day when the temperature was around 20 degrees below zero. He found that the children had too-thin coats, and their feet were often wet. When the children arrived at school, they took off their shoes and put them next to the hot stove to dry quickly. As a result, the cheap shoes would crack after a few days wear. Dr. Clark asked the teacher why she didn't draw a line around the stove far enough away so the shoes would dry slowly, teach the children to oil their shoes, and provide them with slippers to wear in school. The teacher replied impatiently: "I haven't time to do that. I have to teach my health lesson now."

That is being changed. Teachers have books on sewing, delightfully illustrated with pen and ink sketches. The children are learning to do simple things, like mending tears and sewing on buttons. They are learning how to make several kinds of house slippers to save their one pair of shoes. They are being taught how to rip old clothes, dye them and make them over. They are learning to make underwear and handkerchiefs from flour and grain sacks. They are ripping up old sweaters, learning to re-dye the wool and reknit it.

One of the teachers, in summing up her work for the year, said: "I think I got more satisfaction in one year I have taught the clothing project than I have in any phase of teaching. I have seen so much evidence of its carrying over into the home—youngsters teaching their mothers, and helping in the care of the family clothing. The use of skills gained at school to earn money to go to high school just seems to make 'education for better living' come alive!"

These projects represent the framework for the Experiment in Applied Economics—three complete investigations of food, housing, and clothing, each made in two communities as near alike as possible, one to serve as a control community and the other as an experimental community. Children in these communities are being taught reading, writing, and arithmetic through text books designed to meet their particular economic problems. The effect of the text books on the experimental community is being measured against the control community. Dr. Clark and the Sloan Foundation are interested in finding out, scientifically, how much the children and the schools can change the living conditions in the community. They have set no limit on the time of the experiment—it will continue as long as the foundation and the communities are interested.

The man who drops the pebble into the pool never knows how far the ripples will be felt. Already educators all over the country are becoming interested in the "how to live" program for schools. They want to know more about this new educational program which follows up the idea of milk in the diet, with pragmatic advice about how to keep a goat; they want to know about elementary science classes that experiment with that constant problem, stain removal; they want to hear about six-year-olds learning to read and write by making up stories of what they do with a hammer and saw.

The first ripple was felt in January 1943, when the large Auburndale, Florida, school decided to be the first in the country to give a systematic

Why Do People Use Cosmetics?

Isn't it because they wish to improve their appearance?

Why do people wish to improve their appearance? Isn't it because they have a natural desire to be as physically attractive as possible, both to satisfy their self-respect and to please those with whom they come in contact?

The desire to look and be attractive is an intimate part of human nature, and far from being an idle vanity it is an extremely vital adjunct to self-confidence and self-respect.

In the Federal Food, Drug, and Cosmetic Act, the term "cosmetic" is defined as, "(1) Articles intended to be rubbed, poured, sprinkled or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance. . . ."

From this definition it is obvious that the chief functions of cosmetics are to cleanse and to improve the appearance, to beautify.

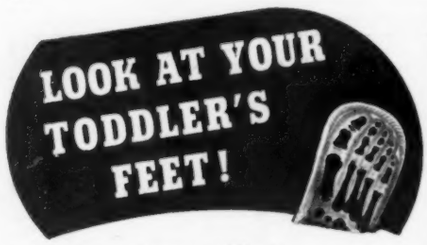
Cleanliness may be said to be the foundation of a lovely appearance. We are sure you will agree that the fundamental reason why people use cosmetics is to improve their appearance, to look lovelier.

It has been said that the function of a cosmetic is to encourage the normal physiology of the skin, not to change it. Cosmetics improve the appearance of the skin; they do not in our opinion change its physiology, which is to say its normal functioning, structure and individual characteristics.

Luzier's Service is made available to you by Cosmetic Consultants who assist you with the selection of suitable Luzier beauty aids and suggest how they should be applied to achieve the best results, the loveliest cosmetic effect. A card addressed to Luzier's, Inc., Kansas City 3, Missouri, will put you in touch with the local distributor of our products.

LUZIER'S, INC., MAKERS OF FINE COSMETICS & PERFUMES

KANSAS CITY, MO.



The X-Ray shows a toddler's foot, twisted and warped in outgrown shoes. Toddlers' feet grow very fast. You *must* get a larger size often.

WEE WALKERS are America's most popular baby shoes because they are soft, flexible, correctly shaped, yet *cost so much less*, you can *afford* a larger size often. No shoe at any price can be healthier for a toddler's normal feet.

See WEE WALKERS...*compare them*...in the Infants' Dept. of the stores listed. Sizes 2 to 8.

COMMENDED PARENTS MAGAZINE CONSUMER SERVICE

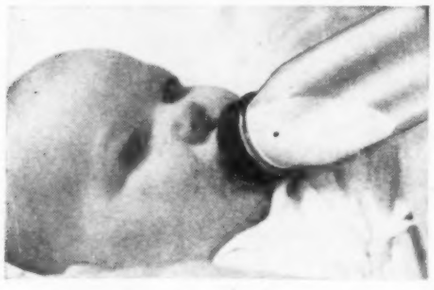
W. T. Grant Co. S. S. Kresge Co. J. J. Newberry Co.
H. L. Green Co., Inc. L. Silver & Bros. Scott Stores
McCrory Stores Schulte-United Charles Stores Co.
Metropolitan Chain Stores, Inc. Kinney Shoe Stores
F. & W. Grand Grand Silver Co. McLellan Stores

SMOOTH ONE-PIECE TONGUE

Prevents pressure on nerves, tissues, blood vessels. A feature found in very few other toddler shoes, *even at top prices.*

FREE: WRITE for pamphlet, "Look At Your Baby's Feet." Valuable information on foot care, and scale to measure size needed. Moran Shoe Co., Dept. H, Carlyle, Ill.

WEE WALKER Shoes FOR Wee WALKERS



EVENFLO—America's Most Popular Nurser

Stores report that the Evenflo Nursing Unit with its handy nipple, bottle, cap all-in-one is America's most popular nurser. They say that busy mothers with babies are asking for this modern nurser in quantities faster than they can supply.

Two reasons for Evenflo popularity are its handy, sanitary sealing cap and the fact that its valve-action nipple nurses evenly and permits babies to finish their bottles better. Complete Evenflo Units are 25c at baby shops, drug and department stores.

The Pyramid Rubber Company
Ravenna, Ohio

Evenflo
Modern Nurser 25c
(Separate Nipple, Bottle or Cap 10c)

course in the three essentials of life—food, clothing and housing. The children entered wholeheartedly into the enterprise. The fourth grade raised chickens in the classroom, taking very seriously the questions of kinds of coops and kinds of chickens. They were particularly desirous of getting a setting hen who would really be serious about her business. After securing a hen, they tried her out with some ordinary eggs before trusting her with their specially selected ones. There were many debates about the amount of exercise she should have, and how she was to be fed over the week-end.

The third-graders in the same school raised two goats, and the fifth and sixth-graders started a garden. Many children planted home gardens—an entirely new experience. By December last year, nine schools were following the lead of Auburndale—five in Florida, one in Kentucky, and three in Vermont, including the 122-year-old Bradford Academy.

As far away as British Columbia, children in 500 schools through the mountains were vying with each other to better their classrooms, their homes, and their lunches. Inspired by the three sets of texts, the Department of Education of this Canadian province has been broadcasting a weekly serial called "Working Together in Tukwilla Valley," dramatizing the adventures of rural pupils.

Another ripple was felt in 1943 at the Nutrition Workshop in Puerto Rico, where Dr. Lydia Roberts of Chicago displayed the Kentucky readers. "In a trip through Puerto Rico and the Virgin Islands," Dr. Roberts said, "I saw that the rural people there needed the same kind of help on the simple facts of how to live that these books provided for Kentucky families. So in June, when it was decided to hold a Nutrition Workshop in Puerto Rico for teachers, extension workers, and others interested in nutrition problems, I naturally turned to the readers as one valuable source of help. It was my hope that these little books might be rewritten or revised to fit Puerto Rican conditions." Now revisions and translations are being made by a group of South American teachers in this country, all of them interested in basic education in their own countries.

From the three original groups interested in food, clothing and housing, the Sloan Experiment in Applied Economics has spread all over the country. New Hampshire, Virginia, Michigan, Texas, and Pennsylvania teachers colleges are interested in conducting their own experiments with problems facing their particular localities. In New Hampshire, the Keene Normal School is trying to raise local living standards by training all teachers to meet school and community problems as well as teach the three R's. The State Teachers College, Radford, Virginia, is making a study of the buying habits of the community. Professor Blanche Daniel, director of the project there, explains: "People who have just left the farm for the factory are bewildered in handling cash income. Help in money management is the main need of adults, as well as children, in this newly industrialized section."

Professor J. C. Matthews of North State Teachers College in Texas, says: "Here is a once fertile region where many farms are worn out and abandoned, and a number of schools and churches are closed. Now, every Sunday morning, teachers, principals, superintendents, supervisors, and parents of children in the various village schools meet with a professor or two from the college at the county seat. They look at motion pictures on soil erosion, or on opportunities for schools to teach better ways of living, such as 'And So They Live' (a movie taken in Kentucky at the beginning of the experiment). Then they discuss some local problems." Out of these discussions have come plans for one school to open a barber shop, and another to publish a local newspaper, both intended to replace services the section has been deprived of by war conditions.

When educators in Michigan began their investigations, they were appalled at the conditions they found. They observed barefoot children wearing summer clothes in winter, living in tar-paper shacks, and existing on skim milk and cornmeal mush; they found uneconomic use of land, lack of proper recreation and community co-operation. As a result some classes in the college are gathering facts about health, food, shelter, and recreation, while others are finding what contributions agencies can make to these community problems.

The work in Pennsylvania centers around the coal-mining area and involves recreation work for the young people. President Robert Steele of the State Teachers College at California, Pennsylvania, has introduced home workshops as a means of getting parents and children to cooperate on a joint enterprise. The development of curriculum material, suitable for home workshops, now plays a prominent part in the preparation of teachers of industrial arts.

The questions Dr. Clark asked himself are now being answered. Hundreds of men and women all over the country are working on the problems which originally had troubled him, and on many other questions growing out of them. The Sloan Foundation, Dr. Clark, and all of the people engaged in the experiments believe that if we are to have a better-fed, better-clothed, and better-housed America in the future, the burden rests on our children. This experiment is a scientific attempt to determine how much of this can be taught in school.

THE GIFT I THOUGHT NO ONE COULD GIVE ME...

Listen . . . they're singing Little Town of Bethlehem, and I can actually hear them! Me, who thought I'd lost the priceless gift of hearing forever.

I'd grown to hate the very thought of Christmas. While others would be happy, I'd feel out of it . . . alone, resentful, imprisoned in a world of silence.

But tonight, I'm as thrilled as a child that Christmas is coming. I'll hear the joyous laughter, the squeals of delight when the presents are opened. I'll be part of things, again.

And, I'll offer a prayer of thanks for a husband like David. For it was he who overcame my foolish fears about wearing a hearing aid and induced me to try a Zenith. That's his Christmas gift to me . . . *hearing* . . . the gift I thought no one could give me.

* * *

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Americas Fight Malaria

(Continued from page 903)

technicians to work in the other countries.

The Inter-American Cooperative Health Service now offers the Western Hemisphere a structure wherein anti-disease campaigns can be correlated. This system of cooperative effort is notably useful in the campaign against malaria, particularly in such places as the Amazon Valley.

From the time the first Spanish explorers sought to penetrate its secrets 400 years ago, the sprawling Amazon basin in South America has stirred the imaginations of men. The old Amazonian challenges met the wartime rubber seekers. Forests so limitless that aviators must fly over them by instruments blanket the Amazon country. Flooded lowlands in the rainy seasons, food shortages, and equatorial heat help discourage men from going into the rubber country.

And still another hazard is malaria.

Now up and downstream the battle against malaria goes forward. Belem, Manaus, Guajira Mirim, Porto Velho, Breves and Altanira have malaria control systems devised by the cooperative service in Brazil.

Included in the Amazonian work is the establishment of a chain of hospitals and medical centers running from Belem, at the mouth of the Amazon, to the forested lowlands east of the Andes in Bolivia, Peru, Ecuador, Colombia. On the Amazon and its many tributaries, malaria control work becomes amphibious. Hospital launches and floating dispensaries ply the great rivers. They fly health service pennants as banners of hope for rubber tappers, producers of vegetable oils, nuts and other essential commodities.

In Belem, the cooperative work took a distinctive turn. To combat the anopheles, engineers had to get the city's feet out of water.

For two centuries the fourteen-foot tides at Belem habitually had backed up the waters of the Para river upon sections of the low-lying city. Torrential rain assisted in keeping the city awash about half the year.

In one of the largest malaria control undertakings in Brazil, the cooperative service designed a dike and drainage system to protect the city. A four-mile dike now stems the twice-a-day tides. And canals drain off water pools. As many as 2,300 Brazilian workmen at one time toiled in waist deep water to set the tons of earth and rubble they carried in wicker head baskets to the dike walls.

Construction ingenuity was at a premium in this work. Engineers had to devise a means of piercing the dike with drainage canals and at the same time keep the tides from backing up the drains. This they did by inserting delicately balanced floodgates at the drainage vents. Now, as the tide ebbs, the pressure of water in the drainage canals automatically opens the floodgates seaward. As the tide rolls in, its own pressure seals the gates against itself and the tidal flow is forced upriver.

Always an important seaport for the export of vegetable oils, nuts, hardwoods and other forest products, Belem became even more important during the war. It was an aerial crossroads on the main routes linking the United States with Africa.

Along the Brazilian coast lies the town of Vitoria, outlet for the Rio Doce Valley, with its great deposits of high grade iron ore and stores of manganese, mica, quartz and other minerals. The United Nations needed these minerals for war industry. The same old obstacles of transportation, food, and health—with malaria at the head of the disease column—hampered development work.

Again Inter-American cooperative service engineers and doctors marched in with the mining, industrial and agricultural forces. As railroad men straightened and shortened the Itabira-Vitoria railway, health service men sprayed, drained or filled mosquito breeding spots. Laboratories were set up at Vitoria and Governado Valaderes. New health centers at Colatina and Aimeres served as command posts for anti-malarial campaigns in the Rio Doce country.

With malaria under control, Brazilians look forward to development of power and mineral resources in the Rio Doce over the long range.

Overland from Vitoria, 2,500 miles or more northwestward across jungles and the Andes, is Chimbote, Peru, one of the finest harbors on the Pacific coast. Chimbote, too, has its hydroelectric resources. And it had a malaria problem. Here the surrounding desert would seem to offer poor breeding ground for the anopheles mosquito. Still, malaria was prevalent.

Shimmering water in Chimbote was no desert mirage. It was stagnant water forming desert lagoons north and east of the town.

Since it scarcely ever rains there, the water could not have come directly from the clouds. Engineers found that the lagoons were outcroppings of subsoil water seeping down from the mountains and through the desert.

The engineers were, therefore, confronted with the curious task of draining the desert. And they did so. The malaria menace abated. Chimbote now looks forward to increasing its population from a current 5,000 to 20,000 in the next ten years as regional development proceeds. The government is improving the port facilities. Hydroelectric resources of the Santa river are being harnessed.

Still other malaria control problems were encountered in Venezuela, Colombia and Central America. Venezuela placed the field personnel of its Ministry of Agriculture and Division of Malariology at the disposal

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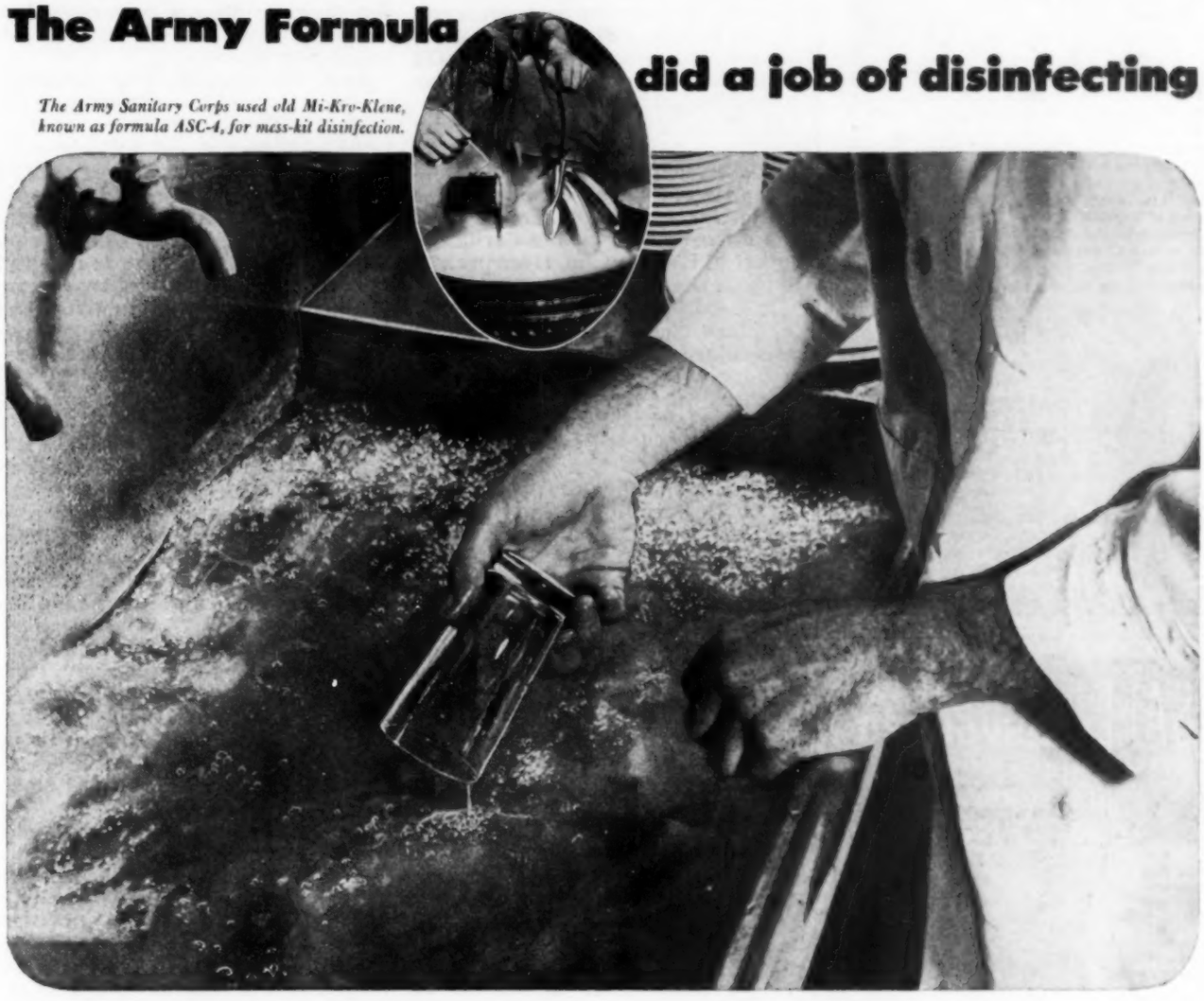

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of the cooperative service. The Ministry of Education launched an educational campaign on malaria employing leaflets, motion picture skits, lectures, the press and radio. Oil companies furnished equipment for control projects in Puerto Cabello.

In Colombia, the towns of La Dorada and Puerto Salgar, facing each other across the steaming Magdalena river, form an inland port for Bogota, the capital. There, a 1,100 mile crow flight from the Caribbean seaport of Barranquilla, river packets tie up in deep water.

Railhead for the capital and a rich hinterland, the La Dorada area might have enjoyed a better economic history, except for malaria. War brought increased need for the port facilities of the two towns. So the cooperative health service laced nearby swamps with drainage ditches. Doctors and nurses distributed anti-malarial medicines. Horizons brightened for the economic growth of these communities.

On the shores of Lake Managua the Nicaraguan capital, Managua, posed a unique malaria problem. During periods of subnormal rainfall the Lake recedes, leaving marshy beaches and old municipal storm sewer vents exposed. The suburban roads radiating from the city are so deeply eroded that they resemble canals. Through them Managua received a torrential run-off from the slopes of higher land.

Engineers built a flood diversion canal known as the Cauce Oriental. On the western side of the city they cleaned up the old Cauce Occidental. On the lake shore they extended the old storm sewers, filled numerous pockets and gullies and built 54 paved and two unpaved drainage ditches. These extend along four miles of shoreline.

Further, sanitary inspectors, trained by the cooperative service, canvassed homes in the city's nine malarial barrios, or districts, where they uncovered numerous anopheles breeding pools. They instructed dwellers in the destruction of the anopheles. A survey in these barrios conducted in 1942 showed average malaria infection in 33.03 per cent of the people examined. In 1943 another survey showed an average infection rate of 7.8 per cent, or a reduction of 76.4 per cent.

Using the most conservative possible basis for the cost of public malaria treatment and man-hours lost, service officials figured the municipality could not have escaped spending at least $96,000 a year before completion of the malaria control projects. These projects cost only $100,000, with $87,000 of their value invested in permanent installations. Estimated yearly maintenance of these is $15,000. Thus, at the approximate cost of one year's former expenditure for malarial treatment, the city now has malaria control installations which will save thousands of dollars yearly.

In many instances anti-malarial projects are of only nominal expense. But their results can be reckoned in many thousands of dollars of salvaged man hours.

In El Salvador, the Inter-American cooperative health services found the coastal coffee export town of Acajutla suffering from malaria. Its diminishing population threatened El Salvador with loss of a valuable trade outlet. The reason—a big fresh water swamp on the inland side of the city. Here engineers and doctors received eager cooperation from other government branches. Locomotives and railroad cars were loaned. Shovels and dirt movers were gathered. Hundreds of thousands of tons of soil were dumped into the swamp. The mosquitoes disappeared. With proper maintenance, Acajutla now looks forward to an increasing population and economic development.

Sonsonate was another Salvadorean town with a high rate of malaria incidence. Again the cause was a swamp back of the city. It was drained. The morbidity rate decreased promptly. The drainage process was carried down the Achichigua river to Nahulingo with similar results. Proof of the economic value of the operation is that land unit values in the areas have begun to soar.

So goes the malaria control story, with variations.

On the eastern slopes of the Andes in Peru a mobile dispensary operates along a 200 mile stretch between Tingo Maria and Pucallpa, giving malarial and other care to 6,000 colonists. In Nicaragua cooperative service engineers found enthusiastic cooperation among rural folk in the development of wells and springs for potable water along the Inter-American highway and in rural communities. Communities frequently contributed funds for this development.

The long geographical jumps in this narrative give an idea of the wide scope of the Inter-American anti-malarial work. Banded together on a parade ground the men and women of the combined Inter-American services would form a compact army of more than 12,000 citizens of 19 American Republics, including the United States. Of these, the preponderant number are at work in malarial regions.

By far, the majority of workers in the cooperative health forces are nationals of the other American Republics. These include 347 physicians, 148 engineers, 126 registered nurses, 2,919 technical and clerical personnel, 1,149 practical nurses and guardas (inspectors and sprayers), and 7,777 unskilled workers. The United States complement in the international force is 238 doctors, sanitary engineers and nurses. And the Services now have a traveling representative to balance the program and use it for training national personnel in new scientific approaches to malaria control.

The Inferiority Complex and Weight Reduction

BEFORE

AFTER

PHYSICIANS with experience in treating obesity know how often this condition is accompanied by an inferiority complex that creates a psychological obstacle to effective treatment.

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But figures alone do scant justice to the actual contributions of the other republics. Their doctors, engineers, nurses and skilled personnel have had wide "on-the-ground" experience with diseases peculiar to their environments. Malaria, in particular, has been a traditional arch enemy to most of them. They know the history of malaria as it applies to their countries. Their spirits are spurred by the desire to see antimalarial benefits extended for years to come. In numerous instances their zeal stirs whole communities, some of which have provided labor, equipment, materials, lands and funds.

Many of the other republics are matching or surpassing sums advanced by the United States in agreement for extension of the cooperative health work. Here again, the countries battling malaria are in the vanguard. The number of citizens of the other American Republics who know that "health makes wealth" are legion. To the United States this means greater access to hemisphere sources of raw and strategic materials, wider markets for industrial and agricultural machinery, automobiles, radios and electrical appliances, airplanes, ships, and steel.

While United States doctors and nurses have learned much in fighting disease in Latin America, their engineering colleagues have found Indian and other lore helpful.

At Heredia in Costa Rica a sewage disposal plant was threatened with delay because of a shortage of steel and concrete. Costa Ricans told the engineers of a wood called "pochote." Pochote never dries, rots or warps. It was tried and found suited to use in the inside walls of the settling hoppers. This saved 500 sacks of cement and thousands of pounds of scarce steel.

In Haiti engineers encountered anopheles breeding bogs watered by springs. The geological formation of the region rules out the use of the usual collection or interceptor ditches. So the engineers "captured" the springs by sinking concrete cylinders into the ground. In turn, the captured springs drained into concrete lined ditches leading to the sea. The bogs were reclaimed for pasture land.

An ancient Indian handicraft served to offset a cement shortage in San Miguel, El Salvador. War-restricted shipping threatened to hold up a malaria control project. Engineers studied methods employed in the molding of clay and sand into tiling in a small local shop. It was a formula which the Spaniards found the Indians using four hundred years ago. Enlisted by the engineers, local craftsmen experimented until they were able to turn out satisfactory inverts. Since the clay, sand and the white earth used are common to other Central American countries, the San Miguel experiment provided an ace in the hole against cement shortages.

In the Andean mountain areas of South America it was found practicable to make cement and mortar out of volcanic dust and ash. And in Quito, Ecuador, engineers learned from local Indian craftsmen the formula for making fire-brick from a mixture of bull's blood and adobe clay. Indians identified it as the technic used by the Conquistadores in erecting cathedrals and municipal palaces.

Most of the malaria work, however, is of the unsung type, tedious medical and engineering plodding in unsalubrious and sometimes dangerous outposts.

The anopheles mosquito in his numerous forms is something of a will-o-the-wisp. Entomologists cannot always point to the insect with the spotted wings and clownish custom of standing on his head and say: "there is the enemy." Probably, he really is the culprit in any given malarial region. On the other hand, he may be found in swarms in nonmalarial regions. Nor is it always true that draining or oiling of swampy tracts is needed to discourage the anopheles. Sometimes whole legions of the poisonous pests will move out of a choice breeding habitat for reasons of their own.

Often, therefore, temporary measures to control the disease are indicated while experts make mosquito surveys and determine the vector. Commonly these are the darlingi and albimanus types found in most of the Americas. There are dozens of other anopheles types indistinguishable without expert use of the microscope. One of these is the high flying pseudopunctipennis, which lives at an average level of 6,000 feet and has been found as high as 9,000 feet. Unlike most of his anopheles brethren, if uncontrolled he could spread malaria in cities as high as Quito, Ecuador.

Once the vector in any given region has been found guilty by a scientific jury, the engineers move in to destroy him. The doctors and nurses treat his human victims. Meanwhile, training programs for doctors, laboratory technicians, nurses, practicantes and guardas go on. Press, radio and films add to the work of awakening people to the dangers of malaria and advise them on treatment.

Popular legend had it that malaria came from bad air. The very name of the fever has roots in the Italian definition "Mal'Aria" (bad air), a disease supposed by old world inhabitants of Mediterranean areas to be the results of inhaling the poisonous emanations of damp ground. In one surveyed hemisphere area, it was found that 60 per cent of the people knew nothing of the anopheles, and traced their fever to the old diagnosis.

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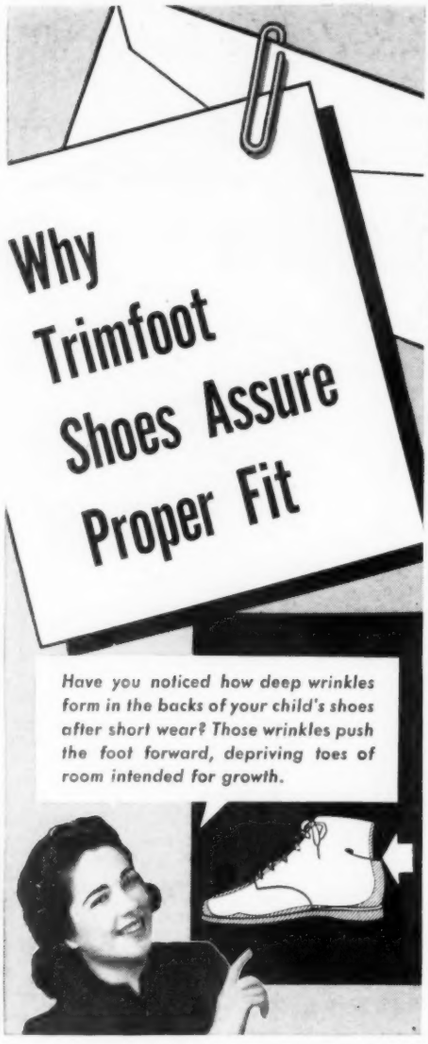
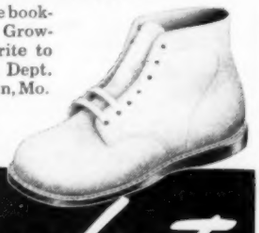
ASK ANY GUILD OPTICIAN FOR THE NAMES OF EYE PHYSICIANS IN YOUR VICINITY


Why
Trimfoot
Shoes Assure
Proper Fit
Have you noticed how deep wrinkles form in the backs of your child's shoes after short wear? Those wrinkles push the foot forward, depriving toes of room intended for growth.

Trimfoot's patented "Cuddle-Back" heels are designed to prevent this. Foot stays in place and room intended for growth is not wasted.

From Birth to 5th Year there are Trimfoot Shoes for your child.

FREE! Valuable booklet, "Care of Growing Feet." Write to Trimfoot Co., Dept. O-6, Farmington, Mo.



COMMENDED PARENTS' MAGAZINE CONSUMER SERVICE

Trimfoot
BABY DEER SHOES
PRE-SCHOOL SHOES

The Spoiled Child

(Continued from page 897)

her sores instead of adjusting her schedule. Many times in the first few days she would cry until exhaustion shut her eyes in profound sleep. Then, when the four hours of the clock came around, she was picked up, a limp lump of oblivion, and taken to her mother to nurse. Often it was difficult to arouse her, and the mother and nurses reported to such measures as snapping her feet, washing her face with cold water and spanking her. Still she was held in her state of exhausted lethargy. The breast milk soon disappeared, and formulas were prepared—always to be given in equal quantities at regular intervals.

But if the baby had lethargy in the daytime, I wonder what she had at night, or rather in the early morning? From about midnight until 6 a. m., she alternated between passionate crying and kicking, and exhausted sleep. They wouldn't give her a midnight feeding, and she was not yet ready to give it up. If they had only known it, she would have given up this feeding of her own accord, when she was about 6 weeks old.

Before Mary was a month old she was called a bad girl because she cried incessantly, wouldn't eat when she was supposed to, and, if she did, was unsatisfied with the amount and kept her mother and father up all night.

What about her sleep? In the case of a young baby, this is so intimately tied up with eating that, as I already have shown, sleep habits were entirely broken up. She slept when she was supposed to eat and wanted to eat when she was supposed to sleep. Spoiling of sleep habits was well accomplished because her attendants were unwilling to recognize her innate rhythms.

Only in the eliminative field were her parents' efforts in any sense successful. The glycerin suppositories produced daily bowel movements. Nevertheless, even in this respect the subsequent history shows that constipation (spoiled stool habits) of possible lifetime duration was started prematurely in the first few weeks of life.

At 8 months the early bowel training began to show its bad effects. Having surrendered her innate bowel eliminative reflex to the urgency of the suppository, when it came time for her to perform on the approved toilet she didn't know what it was all about, refused to act and was called constipated. She was left for long periods on the toilet, dangling her legs in aimless confusion and perturbation. Laxatives were given, which again acted with great urgency, but not on the toilet. As she naturally learned to hate the toilet through prolonged sitting there with nothing to do, her urinary control also became difficult. Then she was characterized as wilfully hard to train.

In the meantime, the continuance of rigid meal and bedtime routines emphasized her early appetite and sleep problems, so that at 1 year of age she was having difficulty in three of the main functions of life—eating, sleeping and eliminating. For her age she was already well spoiled.

I have tried to show how rigid routines can, in the early days of life, produce symptoms of spoiling, the very thing they are designed to prevent. This healthy, vigorous, normal girl was characterized as a bad, crying, sleepless tyrant who wouldn't eat.

But in the second year a new situation greatly complicated the picture. For now she began to move about the house, to get under foot and really to interfere with adult living. The well known "no" stage began. The instructions of the disciplinarians said "never let her handle valuables. Train her to touch only her own things. Keep her down. If you don't rule her now, you never will."

So Mary, whose every fiber said, "Now is the time for me to learn about everything I see," was followed about from morning until bedtime with "No-Noes," until she must have wondered why she was. Now she openly and verbally rebelled, got into trouble and learned the real force of corporal punishment. She fought back, became set in her defiance as her human inheritance ordained, and gradually, in her third year, she emerged a characteristically negative child and refused to conform in any way.

It would be useless for me to spend so much time outlining so many steps in this girl's spoiling, if I did not think such troubles could be prevented by an understanding of what mistakes were made, and even cured after they were made.

What are the major mistakes to be found in this story? They are simple and basic. Practically all the fundamental needs of a child were denied. Affection was withheld when it was most needed, in the trying adjustment period immediately after birth. Her physical rhythms were ignored at that same time, when they are supposed to be most effective. I refer to her automatic reflexes as to eating, sleeping and eliminating. She was denied the basic comfort which results from the use of such innate rhythms. Later on, when she became old enough, she was also denied the right "to do her stuff," a basic need in all children.

The problem of what to do to prevent spoiling is a simple one if its causes are understood. And the technic of applying the necessary measures is just as simple, because, in the main, the preventive measures parallel the natural instincts of all mothers.

From birth onward the basic need for affection must be satisfied in

"I'm not even related—so I can speak"

Here's an unsolicited letter written by Mrs. George Jenkinson, of Shreveport, Louisiana, to the makers of Clapp's Baby Foods:

Jimmy Kern—the baby Mrs. Jenkinson calls "a perfect specimen of health," and a Clapp-fed baby since he started solid food.

At 13½ months he weighs 27 lbs. 5 oz. A good example of how babies thrive on Clapp's!

"A young Army man

and his wife and baby live across the street from me.

"I am taking the liberty of writing you about the baby, because I am sure you will be interested as I, a total stranger, have been.

"This baby, Jimmy Kern,

is such an outstanding child that I asked his mother what she did to have such a beautiful child and such a perfect specimen of health.

"She told me that she fed him on Clapp's Baby Foods from 4 months old. He is now 13 months old.

"I wish you could see this child! I am the mother of three children myself, and I have never seen anything like him."

So we asked Mrs. Mack Kern, the mother of the child . . . was it true what they said about Jimmy?

And Jimmy's mother answered:

"MY SON, Jimmy, is now 13½ months old, weighs 27 lbs. 5 oz., and is 31½ inches tall.

"He has always been a healthy child, and he has been fed Clapp's Baby Foods daily. He now eats Clapp's Junior Foods."

WHY YOUR BABY WILL THRIVE ON CLAPP'S:

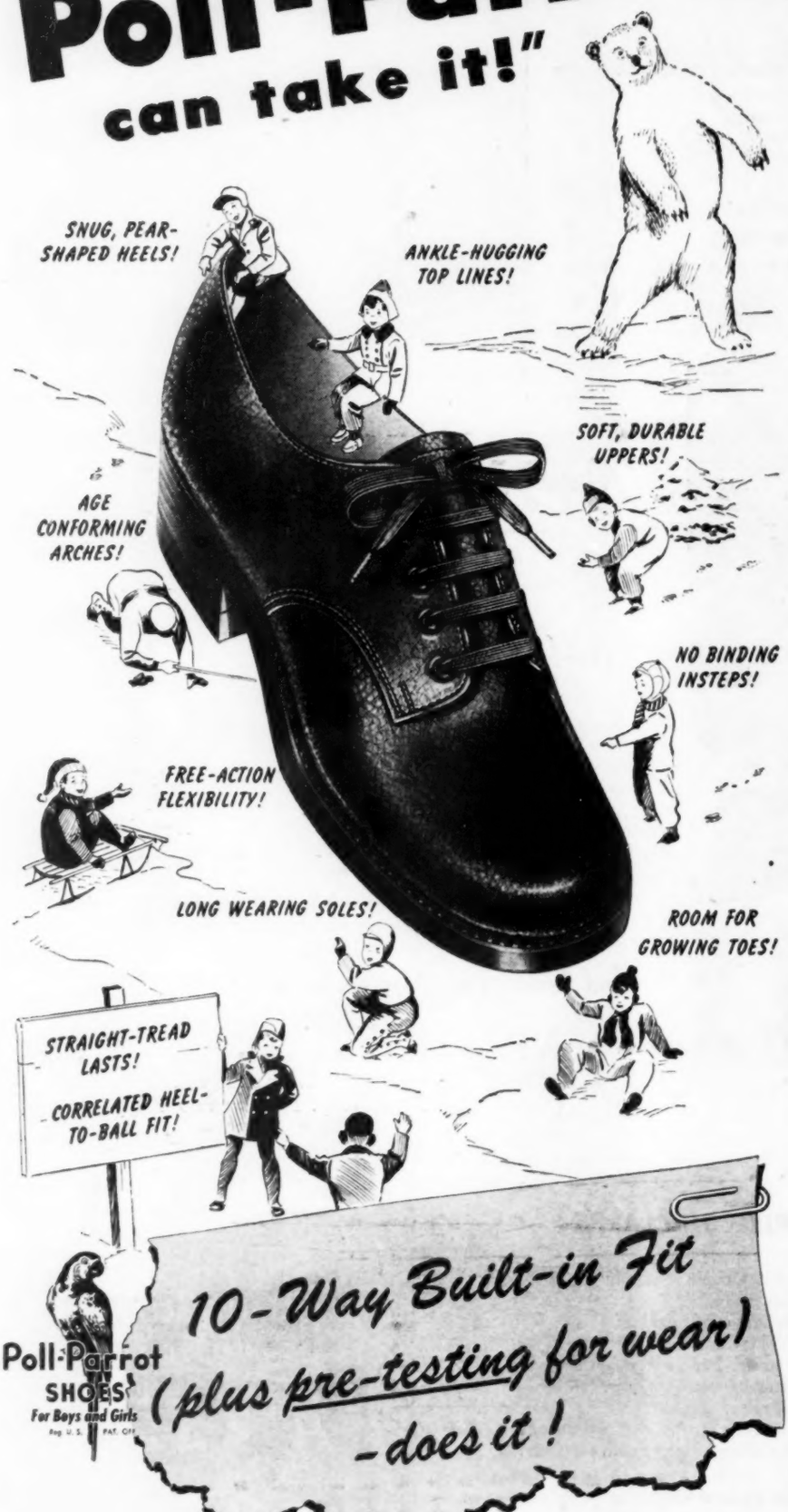
• We make all our baby foods to fill doctors' requirements.
• We make them better than we have to.
• We discard many fruits and vegetables that might be perfectly acceptable for adults, but not, in our judgment, for Clapp-fed babies.
• All our foods are *pressure-cooked*—to help retain vitamins and minerals, fresh color and flavor.
• We believe our business is the most important business in the world. For 24 years it's been our *sole* business, not a side line.

• Perhaps this is why so many doctors prescribe Clapp's Baby Foods regularly.

Millions of babies have been raised on

CLAPP'S BABY FOODS

"Here's why . . .
Poll-Parrots
can take it!"



10-Way Built-in Fit
(plus pre-testing for wear)
-does it!

Poll-Parrot SHOES
For Boys and Girls
Reg. U. S. Pat. Off.

See Classified Telephone Directory for Nearest Dealer . . . or Write
ROBERTS, JOHNSON & RAND • DIV. INTERNATIONAL SHOE COMPANY • ST. LOUIS 3, MO.

order to give a child his most fundamental security, a sort of "belongingness" in the family. This will make it not only permissible but desirable to pick up and fondle a crying young baby. It will foster such outmoded things as lullabies and the rocking chair. We need to have more child guidance people who will endorse these things militantly.

Next, good preventive methods will respect the physiologic rhythms of babyhood. Feeding intervals, sleeping tendencies and the rhythm of bowel evacuations are inherent parts of every baby's make-up. Conforming to them is good medicine, mentally and physically. Such treatment gives much satisfaction to a baby as well as most satisfactory growth in self-reliance. Putting a baby on a "demand schedule" for eating, sleeping and eliminating is sound practice physiologically and psychologically.

Not only in babyhood, but also later on in chilhood, the art of allowing children "to do their stuff" should be studied consistently. The parent who eagerly awaits the emergence of each new attainment in a child and gives it a chance to be exercised will avoid much of the trouble in the "No-No" and subsequent negativistic periods and will help to develop self-discipline in a child. This means that babies should be encouraged to hold their own bottles and cups, to feed themselves with hands or tools, to manipulate all manner of objects, to dress and undress themselves and later on to help with the housework, as soon as they have reached the point of trying to do these things. These and other maturation points in development should be as eagerly looked for as the advent of teeth or intellectual attainments in school, because they have even more to do with successful living in the world.

The object of such treatment is to develop children who, through affection, can be secure in their place in their homes, and through exercise of their innate rhythms, masters of their own physiologic functions and, therefore, confident of their ability to succeed in the ordinary tasks of living. This is the very opposite of what one finds in the spoiled child who is fearful of any challenge to his mother's affection, is a slave to physical habits imposed from without and has to fight the world in order to do anything constructive.

After fifteen or twenty years' experience of giving such advice to mothers, I have yet to find one who feels that being considerate of or "nice" to her baby spoiled him.

What then shall one do with the child who is already spoiled? That is a much more difficult situation to handle than prevention, but it is by no means impossible to treat if the parents will only accept the mistakes which have caused the trouble and try to remedy them.

A good advertising man or salesman would know the way. "The old build up," he would say. I know of

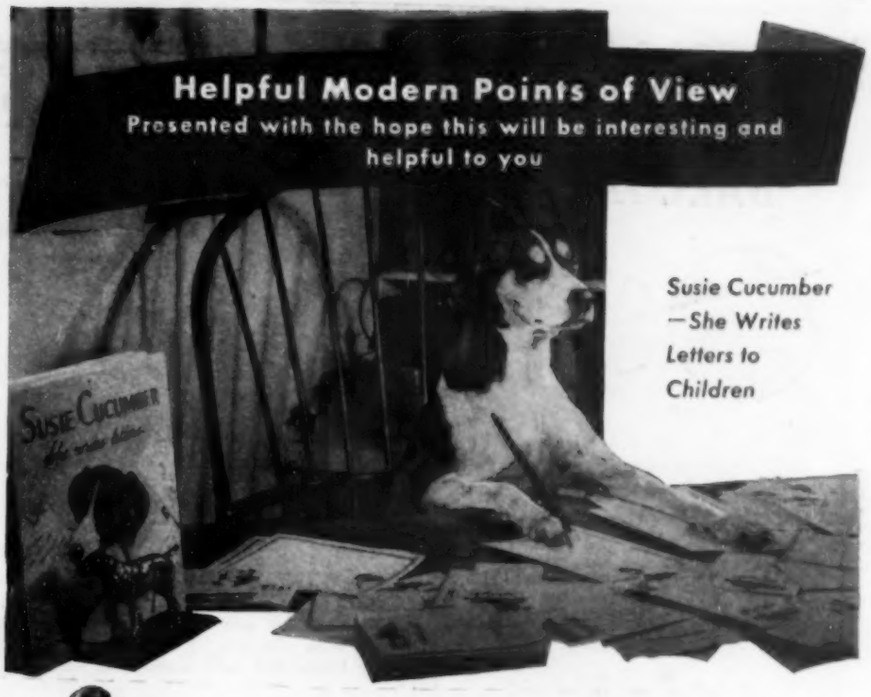
no other way to handle these insecure, frightened, blustering, spoiled children but to build them up. Somehow, by hook or crook, the means must be found to make them feel not only loved but self-sufficient and competent. This may mean giving them a superlative degree of flattery and praise for the most commonplace behavior. A mother may have to search out from all the unapproved actions of a spoiled child just little rays of good behavior on which to focus the build up. The mother may have to manufacture chances to demonstrate her affection or resort to the belated use of the rocking chair or a reading hour with her belligerent child in her lap. She may have to feed her child with a spoon and praise him even if he has been refusing to feed himself. All considerations of pride and tradition have to be swallowed ignominiously for the build up, which alone can effect a real cure.

For not until a child feels in his heart the affection and confidence of his mother, not until he feels in his stomach a confidence in his own eating and eliminative functions, not until he feels in his bones his ability to act as a free individual in the family, not until these feelings are ingrained, can he be grown up enough to exercise self-restraint and be called a cooperating member of society.

This brings up another and final topic connected with spoiling. I would not be interested in taking up the reader's time if I thought this subject were of no more importance than that which it merits in child behavior clinics. On the contrary, many spoiled children—grown-up ones—are firmly seated in positions of great authority in the world, where they may do definite harm. The sort of unsatisfied, insecure, fighting personality which is produced by spoiling may make for temporal success in this highly competitive world, if one can ever call such a personality successful. We are, in many situations, dominated by driving, unsatisfied people who have to rule to compensate for their defects in inner security. They make dangerous leaders.

We tend to excuse this situation by saying that since human nature is what it is, nothing can be done about it. This statement, it seems to me, needs critical examination and thoughtful appraisal, for it is not necessarily true.

Human nature surely must be amenable to treatment. Something can be done about it. The most fruitful place to start seems to be in preventing the personality changes which are unanimously called the spoiled child. In this human effort it is most necessary to go back, all out, to that most human of attributes, affection for the young of the race and respect for their abilities.



For Parents who want to foster a little child's interest "outside himself"

Perhaps Susie Cucumber, the little dog photographed above, who corresponds with children may serve as a real inspiration and help to you. You know how a child loves to get a letter and according to Modern Child Study Experts getting letters can do a lot for youngsters at this age when mental development is manifesting itself in interest in world about them and in their conversational ability.

For Children 3 to 8

Now, Susie Cucumber writes letters on the 3 to 8 year vocabulary level. Any child put on her correspondence list gets a series of 7 or more letters—1 a week—written on her own personalized stationery.

Fun and Education

She tells about her special animal friends and of course of her own doings which include trips to such historic spots as Washington, D. C. and Mt. Vernon. Most letters enclose some small surprise—a flag, famous art picture, seeds to plant, etc.

Helps Encourage Letter Writing

Besides, Susie has published a book about herself, "Susie Cucumber—She Writes Letters"... 64 pages in stiff, bright covers with picture on every page. Probably you could see this book at your local library or bookstore.

Parents' Magazine specially commends both above book and letters.

If interested—for further information write to Susie Cucumber herself at her home, Fort Hunt Road, Alexandria, Virginia.

We hope that the foregoing is helpful to you just as in the past Wrigley's Spearmint Gum has been helpful to millions of people.

Remember this wrapper—
it is empty now and will stay so until it is again practical to produce such peacetime quality and flavor as Wrigley's Spearmint chewing gum. 2-46

PLAKIE WATER BALL

Among the many new novelties in Plakie's large line of quality toys for tots and toddlers is the Plakie Water Ball. This is a crystal clear ball, partially filled with water in which a funny little modern fish splashes playfully about to baby's amusement and delight.

AT YOUR RETAIL STORE
OR WRITE FOR FOLDER

PLAKIE BABY TOYS

PLAKIE TOYS, INC.
Youngstown 1, Ohio

Build Up Your Child's IQ

PLAYSKOOL TOYS

Color and shape discrimination . . . eye-hand co-ordination . . . solving of simple problems—these are the basis of most intelligence tests for children. And these are the psychological principles upon which famous PLAYSKOOL wooden and plastic toys are designed. There are special PLAYSKOOL toys for each stage of your child's development—from six months to eight years. Completely safe—rounded corners and harmless colors. Endorsed by leading child psychologists, educators, and parents.

Playskool toys have been scarce during the war due to the shortage of labor and material. All leading department, infants' wear and toy stores will have increasingly larger stocks of them from now on.

Send for Toy Catalog—Send coupon and 10c *today* for illustrated 1946 catalog of Playskool Toys. Contains valuable articles on child training by a leading authority and a child psychologist. Also important facts on proper selection of toys.

Playskool Manufacturing Company
1762 N. Lawndale Ave., Chicago 47, Ill.
I enclose 10c for 1946 Playskool Catalog.

Name .....

Address .....

City ..... State .....

(Continued from page 900)

ARTISTIC DEVELOPMENT—ARTS AND CRAFTS

Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.	Primary: 6 to 8 yrs.
Color cones	Large jumbo crayons	Mosaic games
Large colored beads	Colored blocks of various sizes and shapes	Peg boards
Block bus with shaped, many colored removable parts	Finger painting	Bead board
	Peg boards	Spool board
	Large colored beads	Blocks
		Smaller crayon
		More detailed pictures to color
		Clay and wax modeling
		Finger painting
		Colored chalk and blackboard
		Tracing equipment
		Water coloring equipment
		Splatter painting
		Easel

Art work of temporary measure is most enjoyed at these ages, such as the design made by mosaic games, peg boards and the like. If the design is not just what the child wishes, he can quickly and easily dismantle it and try again. Wax and clay models and blackboard work also can be changed at will. Youngsters who wish their work to be lasting will enjoy finger and splatter painting and crayoning.

9 to 12 yrs.	13 to 14 yrs.	16 to 18 yrs.
Crayons and rather complicated pictures to color	Interest continued in all the arts but of more detailed and complete nature	Artistic interests have developed into hobbies of practical application for making a livelihood. Interest continues in all arts and crafts mentioned and becomes more detailed and complex
Water colors and brush	Indian bead work	
Pastel painting	Wood-burning equipment	
Charcoal painting	Soap carving	
Ink painting	Reed and raffia	
Enamel painting	Crepe paper artistry	
Tempera paints	Leather tooling	
Wax and clay modeling	Linoleum designing	
Splatter painting	Potato blocking	
	Blueprint designs	

The true beauty of art and color is now beginning to be really appreciated. Art of lasting qualities will be desired, and striving for perfection will be uppermost in most young minds. Making equipment to carry out art work as well as the constructive and creative work itself may be classified here. All constructive and creative work might also be classified as a form of artistic development. Many artistic abilities and interests will be carried on into adulthood and followed either as a profession or hobby.

TOYS TO STIMULATE KNOWLEDGE AND AID IN SCHOOL ACTIVITIES

Toddler: 1 to 3 yrs.	Preschool: 3 to 5 yrs.	Primary: 6 to 8 yrs.
Pictured and colored blocks	Same toys as in other tables with gradual change in use and more understanding of color, numbers, pictures, etc.	Design sets as hammer and nail and wood sets
Any colored wooden toy. Pictured boxes of various sizes and colors	Large jumbo sized colors	Garden tools
Pictures and picture books	Blunt scissors	Sewing cards
	Pencils and pencil box	Building blocks of all types
	Mosaic games	Simple embroidery
	Finger painting	Dolls and doll house
	Take apart toys	Toy musical instruments
	Mallet and peg sets	Medical kits
	Push and Pull toys	Pets
	Large ball	Marbles and dominoes
	Letter and number forming games	Card and board games
		Chalk and blackboards
		Clay and wax modeling
		Tracing equipment
		Crayons
		Pencils and inks
		Books

All toys and activities listed in previous charts may be found under this heading, since all play activity aids in some degree with school activities and stimulates knowledge. School seems to be a combination of all the other five classifications of activities. For the older age groups, materials from the other charts may simply be listed as aids to stimulate knowledge.

Naturally we want our boys home. The sooner the better.

But how much are we willing to do about it?

Are we willing to pay for bringing them back? If we are, we'll buy *extra* Bonds in the Victory Loan.

And after these fellows get home—these men who have fought and won the toughest war America has ever known—what then?

We want to take care of the injured ones, of course. We want to see that the young fellows who went off to fight get a chance to finish their education. We want to see that there are jobs—plenty of decent jobs—for the men who've been doing the world's meanest job at army pay.

How much are we willing to do about that?

If we're really serious about wanting to see that our men get what they have so richly earned, we'll buy *extra* Bonds in the Victory Loan.

Now's the time. Let's have a show of hands—with wallets—to prove how much we really want to hear that old familiar step and that familiar voice yelling "It's *me!*" Let's prove, with pocketbooks, that we can do our job as well as they did theirs.

VICTORY LOAN

THEY FINISHED THEIR JOB—
LET'S FINISH OURS!

HYGEIA
• THE HEALTH MAGAZINE •

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

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Approved for VITAMIN D upon periodic tests

—for Your Youngsters

When this seal appears on food and drug products, it guarantees they contain a full quota of Vitamin D—"The Sunshine Vitamin." Every product bearing the seal is rigorously tested in the Foundation laboratories at regular intervals to make certain it has full potency.

For twenty years the Foundation has carried on this program of research and testing. It licenses only products of definite value. That is why the Foundation has won the complete confidence of the Medical profession and the public. Look to it for your added guarantee. Write for Free Booklet —it helps you nourish your family better.

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Please send me FREE your booklet "Nutritional Check-up Chart." Extra copies 3c each.

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•A Scientific Fit that Endures with Constant Wear

Balanced Construction means better fit—longer wear. Running, tumbling, active feet are held in perfect balance while young muscles develop properly—as nature intended. And because of the nature of Balanced Construction, Acrobat Shoes actually hold their shape longer—giving a finer fit that lasts and lasts. $3.00 to $5.50 according to size.

FOR BOYS AND GIRLS

ACROBAT SHOE COMPANY
Division of General Shoe Corporation • Nashville 1, Tenn.

Facts About Measles

(Continued from page 911)

Of course, doctors today know measles when they see it; they do not always have to wait until the rash appears—often they can diagnose it when it's just a sniffle and a cough. But, naturally, the doctor can't decide whether or not a child has measles until he sees him! At all times, and especially when there are signs of measles in the neighborhood, mothers should develop an eagle eye for colds and coughs in their youngsters. A child with a cough plus a fever should be put to bed immediately, and the doctor should be sent for without delay. Perhaps it won't turn out to be measles, but the sooner you know what you're dealing with, the better off the child will be.

When a mother is nursing her child through measles, her main job is to follow the doctor's orders. But there is lots she can do on her own to make the days in bed easier on the child—little things like keeping the bed free of crumbs and wrinkles, fastening a flapping window shade and helping him to amuse himself when convalescence begins. To the sick child, it's the little things that count. When mealtime comes, she should serve just what the doctor ordered. It's no real favor to a sick person to sneak in some dish that the doctor said was taboo. A much better idea is to encourage him to want to follow the doctor's orders. Eating should be a highlight of the child's day—and since he's not likely to have much of an appetite, his mother will have to go out of her way to bolster his interest in food. The tray should look so attractive that the child can't resist its contents. Dishes and silverware should sparkle and shine. Foods should be served just right—not too hot nor too cold.

Naturally, since measles is a catching illness, the sick child must be kept in a room of his own. All other children in the family should stay out of the room. The home nurse or mother should check and double check each time she leaves the room to see that she carries no disease germs to other parts of the house. Her hands should be scrubbed with soap and water, and a brush, when she leaves the sickroom. She should have a special apron which she wears only in the sickroom. All dishes used by the patient should be boiled before being washed along with the family's dishes.

Measles affects a child's eyes, and it's necessary to protect them against glare and strong light. There was a time when most mothers thought that the only way to safeguard a child was to keep him in total darkness. Today we know better; we know that fresh air and sunshine are too valuable to be shut out of the sick room. Nothing could be more harmful to a child sick with measles, or any other disease, than to confine

him in an airtight, darkened room, with shades drawn tight and extra covering draped over the windows.

Too many people stick to the old-fashioned, backward ways of treating illnesses, despite all the progress made by modern science. Babies and young children become seriously ill, and even die, because parents stick to the time honored fantasy that measles is completely harmless to every child—no matter how young he is. Don't make their mistake! Recognize measles for what it is—usually a mild disease for older children but always a highly dangerous one for infants and young children. If you have a child under 5, do all you can to protect him against measles. If he is exposed—or even if you just think he has been—take him to your doctor for treatment. Your doctor can secure the necessary protective substance.

Surgery for Hernia

(Continued from page 901)

sure and so force the sac contents to become larger. The examining finger locates the weak spot in the abdominal wall, and then the hernial sac filled with its contents can be felt, especially when the patient is asked to cough or strain. There are a number of other technics which help the doctor to demonstrate a hernial sac.

Any tissues or organs which find their way into a hernial sac are in an abnormal anatomic situation. Such tissues or organs may then become so involved that most of the symptoms relate to them. Thus, as we have seen, a piece of bladder in a hernial sac may give rise to urinary symptoms, a piece of intestine to intestinal symptoms, and a piece of stomach to stomach symptoms. The most frequent complication in hernia is what is known as strangulation; this produces impairment of the function of the tissues or gangrene. Immediate operation is then necessary in order to relieve the strangulation and deal with the affected organs properly.

The treatment of hernia may be divided into the conservative and the operative types. In the conservative treatment, either nothing is done at all, or mechanical measures are used to push the hernia swelling back into the abdominal cavity and keep it there. The best known mechanical device for this purpose is the hernia truss. This has a rounded pad at one end which is placed over the hernial site. It is kept in place with pressure by means of a spring-like device. In a great many cases a truss will give symptomatic relief—that is, it will relieve the discomfort or pain caused by the condition. The chief objections to a truss are the discomfort which it produces itself and its lack of curative power. The truss has a definite place when an operation is inadvisable because of

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old age or other factors resulting in a "bad surgical risk."

Operative interference is needed in order to cure a hernia. There are a variety of surgical technics which can be used. The basic principles are to locate the hernial sac, to isolate this sac, open it, push its contents back into the abdominal cavity, and then to close the sac flush with the abdominal cavity by means of a suture. The excess sac is then cut away. A plastic muscle operation is then performed in order to make a firm wall against the weak spot in the abdominal wall through which the hernia originally emerged.

Adolescents and adults should have their hernias repaired unless there is a definite contra-indication to an operation because of something serious in the general physical condition. With the passage of time, hernias have a tendency to become larger, to produce more symptoms and discomfort and to predispose to strangulation. Hernias in older people may often be treated best by operation too. Improved technic, anesthesia and postoperative care today minimize the surgical risk.

Postoperative care is extremely important. A hernial repair may look almost perfect on the operating table, but certain principles of early and late postoperative care should be followed in order to give the best chance for firm healing and a permanent cure. Straining, coughing and overactivity are avoided so far as this is possible while the patient is still in bed. A period of two weeks in the hospital is considered sufficient time for the average patient who has been operated on. More complicated cases may require a longer period. After leaving the hospital the patient should be comparatively inactive for at least two weeks. Then follows graded activity, but any violent work, heavy lifting or strenuous exercise are avoided for at least six months. It does not take much violence to spoil a good operation, for the tissues which have been repaired cannot stand too much strain. These tissues may easily be torn, and thus there may be produced a good anatomic reason for recurrence of hernia. Recurrent hernias are more difficult to operate on. The more recurrences, the less chance of a permanent cure.

Since workmen's compensation laws came into effect in this country, many more cases of hernia have come to the attention of physicians. Any employee who believes that a hernia has been produced through an accident or undue strain while at work should immediately report the situation to his employer. Employee and employer then fill out the appropriate reports, and the former is entitled to consult the physician of his choice. But, whether or not the condition is associated with employment, any one who has reason to suspect that a hernia exists should get prompt medical care. Better too soon than too late!

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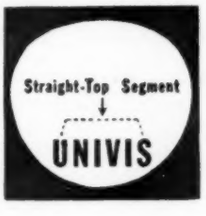

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If You Work—You Win

(Continued from page 917)

Native American attitudes toward handicrafts differ almost as greatly as the types of men one will find in any hospital ward; not always is it easy for therapists to combat the lethargy and prejudice of men, who, conditioned to rugged living, glad to be free of the stark grimness of war, and wishing only to relax, frequently show contempt for craft projects. Many soldiers have never made anything with their hands, and find it doubly difficult to kindle an interest when physically uncomfortable, if not in actual pain. Others have creative interests and aptitudes, but also a definite antipathy for anything less than furniture making or sheet metal work.

In her daily rounds the therapist meets all new patients assigned to her wards and acquaints them with the occupational therapy program. Since cooperation of the patient is the most important single consideration, the routine thought of every therapist in her initial contact with him is to find out what he did as a civilian, what he has done in the Army, what he really likes to do and what his hobbies are, then spare no ingenuity to devise a correlated therapy project which will catch his imagination and at the same time provide the specific type of activity which will benefit his condition.

Diversional therapy is generally begun on a voluntary basis, but is often prescribed for men in the neuropsychiatric groupings. Those receiving treatment in rheumatic fever, general medicine and general surgery sections, and orthopedic patients for whom functional therapy has not been prescribed, are encouraged but not required to engage in some craft activity. Available diversional projects include a great variety of arts and crafts: painting, leatherwork, wood and plastic carving, ceramics, basketry, weaving, wood and linoleum block printing, sketching, jewelry making, lettering, fly tying and crayon or paint stenciling on textiles. Many of these are adaptable as ward crafts, while others may be carried out only in an occupational therapy workshop.

At Torney General Hospital, Palm Springs, Calif., one of the three Army rheumatic fever centers in the nation, a registered therapist and trainee assistant are assigned full time to the rheumatic fever section, where diversional therapy requiring graded activity is stressed. In this section the principal object of occupational therapy is to combat boredom, since during the initial treatment period the patient must remain quiet. An effort is also made to interest him to such an extent that he will dwell less on the possibility of permanent cardiac involvement—a fear which besets all rheumatic fever patients but which is actually realized in only an estimated 10 per cent of the cases.

Recently in this section an enlisted

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man formerly employed as a wholesale textile salesman spent several weeks making an afghan for his wife and achieved highly successful results. Another man from the European theater worked out original designs for leather photograph holders of marketable quality. Prior to his hospitalization he had never undertaken a craft project, but the skill which he developed while confined in bed led to the production of fine leather craft, which, he believes, will be an enjoyable and profitable avocation for postwar years.

Recently assigned from the patient detachment to the special services staff as part time poster artist is another enlisted man whose work with a brush began as a diversional project. Working under the direction of a competent artist while recovering from a severe foot injury, this man lettered scores of departmental signs before discharge. A former meat salesman who participated in every major battle from El Alamein to Rome, he has discovered and become proficient in a new manual pursuit which may lead to better full time employment when he receives his Army discharge.

Functional occupational therapy, prescribed to facilitate recovery from certain types of illness or injury which result in dysfunction of body areas, combines diversion with its curative mission. Frequently men who have incurred multiple wounds may be partially immobilized in casts long after hand, arm, thoracic or shoulder injuries have healed sufficiently to begin muscle re-education, recoordination, flexion and extension. At the direction of the attending orthopedist or medical specialist a progressive functional program will be instituted while the patient is still confined in bed, and then continued in the functional workshop when he is able to go there, either in a wheel chair or on crutches.

A hand which will flex only slightly will be given tools with built up handles which can be grasped easily; smaller instruments will be substituted progressively as the flexion becomes more normal. To increase mobility of ankle and knee joints, strengthen muscles and bones injured by machine gun or rifle bullets, shell fragments or land mines, prescribed therapy may take several forms. In the functional workshop patients are assigned in accordance with their interests and physical needs. They work at four foot treadle looms (where injured shoulders, arms and backs also benefit); at treadle operated sewing machines which have been converted into sander's or potter's wheels; or on some particular craft requiring use of the foot operated bicycle saw. On weaving and cord knotting looms placed at various elevations they work at gradually increased heights toward the attainment of normal overhead reaching. Dozens of other projects, each devised to benefit some specific condition, progress simultaneously in this functional workshop. All functional therapy is under the guidance of the chief of the orthopedic section, with supervising therapists always present to direct each patient and prevent overactivity.

Less therapeutic in character and more closely allied to physical reconditioning is prevocational therapy, available only to patients who have achieved partial recovery and progressed to the convalescent section of the hospital. These men, given a choice of many reconditioning activities but required to follow some definite project, enrol voluntarily for prevocational therapy. The large, airy, well lighted workshop is removed from the central hospital area and equipped with modern power and hand tools, plastics, sheet and rod metals, wood and old truck motors. There, convalescents produce with drill press, jig and centrifical saws, automatic sander and hand tools, those articles which arouse their interest or increase their dexterity for after-discharge jobs.

Frequently men going back to motor maintenance thoroughly overhaul truck motors. Carpenters make cabinets or accessory furniture and machine shop workers turn out a succession of metal mechanical gadgets. Each man chooses his project or projects and completes them. He may undertake a highly diversified program as long as he follows

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through, since expendable materials are constantly in demand and waste is not permitted. If he wishes, a patient may carry on work in the prevocational and diversional workshops simultaneously, or as an alternative he may choose industrial therapy, which is a regular work assignment requiring from one to several hours daily.

Registering for industrial therapy, the convalescent states his work preference. If such work is available he will be assigned accordingly; if not he will be placed on some other work which is also agreeable to him. A man interested in motor mechanics will, if possible, be assigned to the motor pool. Others work in medical supply and the post office, do carpentry work about the hospital, serve as athletic instructors and teach educational reconditioning classes.

Experience at Torney General Hospital indicates that patients given a definite job to do are among the happiest convalescents. Hospital hours pass more quickly, and they have the satisfaction of knowing through experience that they have again become self reliant, useful to themselves and to the hospital. Briefly, the hospital has found that a patient is happiest when doing something which he enjoys, and that occupational therapy undertaken as a daily activity early in his hospitalization will convince an injured man that he can regain almost normal use of injured areas if he will work progressively for his own betterment.

Although in prevocational or industrial therapy a man may not always select work which will give specific action to a healing arm or leg, he will approach normal activity through his work, whatever it may be. Of necessity he will walk, bend, reach downward and upward for supplies and unconsciously perform most of the normal movements as he gains interest in the job at hand and focuses less attention on himself.

In some instances occupational therapy is proving to be the groundwork for after-discharge vocational rehabilitation—a function of the Veterans Administration. In almost every instance it is the beginning of a pleasurable hobby, if nothing more, and in teaching men to overcome their potential handicaps through their own efforts, it is of important psychologic benefit to the seriously injured.

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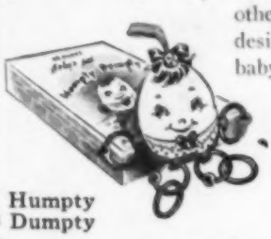

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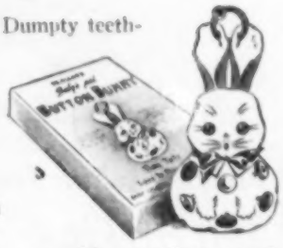

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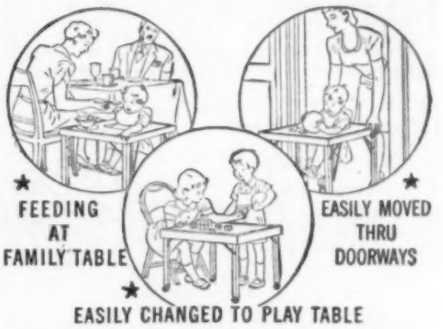

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Your Back

(Continued from page 907)

tinuously building, destroying and repairing our bodily tissues. The most remarkable feature is that these various processes are going on simultaneously, synchronously and reciprocally. The tissues of the back are supplied with blood by a pipeline system of various sized tubes. The finest capillaries or blood vessels are almost as delicate as those in the eyeball or the brain. The spinal cord and the central nervous system form an electric cable and message center that are more wonderful than the finest telephone and telegraph exchange center. Scientists boasted when they perfected the transmission of a two-way conversation over the same copper wire. Yet a person can send thousands of impulses simultaneously up and down the spinal cord.

When troubles occur along the circuit, there are many signs, symptoms and tests which indicate what the nature of the disturbance is and where it is located. Backache is not a disease; it is a symptom, like coughing or sneezing or a chill. There have been several epochs or milestones in the medical history of back complaints, some of which were considered fads. Among these diagnoses were lumbago, railway spine, sacro-iliac dislocation or displacement, and hypertrophic arthritis. At the present moment, interest is centered on the intervertebral disks and their disturbances. Some of the everyday acts that may cause backache are: raising a window that is stuck (this may occur in the home or office, or in a street car or train); kicking a football and connecting, or missing; missing a step, especially on stairs; bending down to get objects out of a grip that is on the floor; arising suddenly from a stooped position; extricating locked auto bumpers; handling a heavy suitcase in a crowded Pullman car; sneezing, especially by an asthmatic or hay fever victim; climbing on a stool or chair and slipping; lifting a heavy object and twisting the back; moving furniture, especially putting a rug under a table or couch; slipping; shoveling; sitting in a cramped position, as when doubled up in an automobile or Pullman seat; working a long time in a flexed position; standing for many hours in a slightly off balance position; reaching for the soap or sneezing while sitting in a bath tub with legs outstretched; stooping and twisting to pick up something that has rolled under the dresser; and lifting a heavy or cumbersome object like a bicycle from a level lower than the one on which you are standing.

The efficiency of a person's back is directly proportionate to his original physical endowment, his posture, muscle power, ligamentous support, metabolism, bone structure and excessive or continued stress and strain. In men past 50 years of age, backache is frequently due to prostate gland trouble; in females it is often due to disorders of the pelvic organs. Obesity may be in close relation to some back troubles, both in males and females. Overweight causes extra stress and strain on the muscles and especially the ligaments of the back, abdomen and pelvis.

The term psychosomatic means the relation of the mind to organic trouble. There is a trend among some physicians today toward emphasizing the mental attitude of the patient toward his back trouble. The danger of this lies in the neglect of a complete history; a complete physical examination and adequate x-rays of excellent quality and sufficient coverage. But, very often, backache is a defense mechanism—that is, an escape from an undesirable situation, either by exaggeration, or overemphasis of an organic condition; by malingering, or wilful exaggeration of a complaint for specific gain; or by hysteria, an unconscious phenomenon.

Before the doctor can conclude that backache is caused or aggravated by any of these mental or emotional factors, however, he must first complete his physical study. A careful examination of the back is the basic foundation of an accurate diagnosis. This study often includes examination of other parts of the body, such as the head, neck, chest, abdomen, pelvis, legs and feet. The accurate interpretation of symptoms must be based on extensive knowledge and wide experience.

Cooperation of the roentgenologist, neurologist and orthopedic surgeon is essential in determining the exact cause involved in the production of backache. The importance of good x-rays, especially, cannot be over emphasized. In order to be of maximal value, the x-rays must be of high quality, and they must cover a sufficient area.

The patient with back trouble is interested in the outlook from the standpoints of discomfort, disability and deformity. Discomfort means pain or tenderness during the day or night, during activity at work or play. Disability means inability to perform the activities that are usual at a person's age; it means loss of normal function—that is, alertness, coordination, strength and endurance at work, at play or in the home. Deformity means disturbance of normal shape or posture.

A person can inherit a weak back, just as he can inherit red hair, blue eyes, large tonsils or flat feet. I know of families with several members who have similar back troubles. A person's back may have individual or familial abnormal mechanical characteristics.

QUESTIONS AND ANSWERS

Exercise and Menstruation

To the Editor:—1. What is the effect on the pelvic organs or menstrual functioning of doing any of the following exercises during the menstrual period: An easy jogging run done for four to five minutes, used to warm up the muscles and increase circulation; squat jumps continued rhythmically for a given number of counts, say ten to twenty (this consists of a bounce or spring upward into the air with the feet just off the floor, starting from a deep squat position); trunk raising from a lying position, used to strengthen abdominal muscles; trunk twisting movements; and exercises involving the vigorous use of one leg at a time?

2. If these exercises are not harmful to the average normal girl during the menstrual period, should there nevertheless be a curtailment at that time of the number of repetitions of these movements?

3. Should any of the exercises be omitted during the menstrual period for certain girls, even though the average girl need not omit them?

4. If so, how can it be known which girl is the one who should omit them?

5. Is there danger of uterine displacement in doing any of these exercises during the menstrual period? Nebraska.

Answer.—It is not possible to make any unequivocal statement concerning the precise effects on menstrual function of exercise performed during the menstrual period, because research on which to base such statements has not been carried on to any great extent. The statements given here, therefore, represent only conservative opinions based on the available literature, supplemented by observation of the apparent effects of exercise on many girls and young women in physical education classes.

There is no physiologic reason why moderate exercises should not be carried on during the menstrual period. As a matter of fact, for the average normal girl a certain amount of exercise is beneficial at this time, as exercise increases the circulation and thus tends to prevent pelvic congestion. The physiologic changes which take place at menstruation are an increase in the thickness of the lining of the uterus, associated with dilatation of the blood vessels. This makes the uterus heavier than during the intermenstrual period. Because of the fact that the uterus is heavy and congested, it is usually advised that exercises involving jumping or heavy lifting be avoided at this time. This precaution is taken to prevent the possibility of the heavy uterus becoming displaced. Of the specific exercises listed in the question, the only one which should probably be avoided is the squat jumps.

For the girl who shows any abnormal symptoms, including pain, it appears safer to modify or limit physical activity. If pain is caused only by congestion, poor posture, or constipation, mild exercise without strain may be beneficial. Pain caused by structural abnormality or functional pathology may be aggravated by such exercise. Lacking specific diagnosis of the cause of pain, therefore, the conservative procedure is to limit exercise during the period. Diagnosis of the degree of pain is, of necessity, subjective, and the teacher has no accurate method for distinguishing the malingerer from the girl who is really suffering. Recognizing this, in the absence of specific medical information about the individual girl, it still seems advisable to let each girl decide for herself whether or not she is suffering sufficiently to require excuse from activity, in order to protect those girls whose difficulty may arise from definite physical disorder.

With reference to the general effect of exercise on the body during menstruation: The danger of uterine displacement by exercise within the normal range of activity appears to be slight. The uterus is suspended by the broad and round ligaments in such a way that it is supported by the bony pelvic floor, resting on the bladder, which serves as a cushion. It is securely surrounded by the other pelvic organs, which, being of essentially the same density as the uterus, serve to make independent movement of the uterus in response to movement of the trunk almost impossible. More important would appear to be the possibility of lower back, sacro-iliac, or lumbo-sacral strain. There is some evidence of increased relaxation in the pelvic ligaments during the menstrual period. If strenuous exercise is performed with the joints in a mechanically disadvantageous position at this time, the likelihood of strain would be increased. Pressure on the abdominal cavity induced by excessive or extremely strong contractions of the abdominal muscles immediately before or during the menstrual period may serve to increase the quantity or duration of flow in some girls. In others the flow may be decreased or interrupted. While it is true that many girls and women can and do participate in all types of physical activity during the menstrual period without apparent harm, the state of our present knowledge concerning all aspects of menstruation is such that the best general advice to teachers would seem to be: If there is any doubt as to the effects of a given exercise, omit it during the menstrual period.

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Stay Dentally Fit

(Continued from page 920)

Although George did pass the physical requirements, he was on the Army's list for dental rehabilitation. He was under military orders to keep all dental appointments so that he would be made dentally fit for overseas duty. Teeth that could be saved were treated and filled; necessary extractions were performed, and a bridge was constructed to replace the missing teeth.

When George looked in the mirror, he undoubtedly was pleased with his improved appearance. It was more than coincidence that from then on George Miller showed his teeth when he smiled and moved his lips when he talked.

He even had his picture taken while he grinned broadly into the camera. He sent it home to the folks with a note saying, "How do you like the choppers?" For the first time in his young life he was proud of his personal appearance.

George Miller was one of the more than a million men dentally rehabilitated by the Army Dental Corps—a number equal to more than fifty-three divisions that could not have otherwise qualified for overseas duty.

The results of dental examinations of draftees were not surprising to organized dentistry. The profession was aware that the most common disease in the United States was dental caries (decay). It is a progressive disease which affects more than 90 per cent of our population.

Thus, when America went to war, the Army and Navy Dental Corps accepted the full responsibility for the rehabilitation of men who could not meet the minimum dental requirements. Such a vast undertaking and mass rehabilitation program had not been heard of or recognized before in the history of dentistry, medicine or warfare.

Recognizing the important contribution the service dentists have made to the nation's dental health, the American Dental Association is now pointing to the future. More than 10,000,000 young Americans in the armed forces have been made dentally fit. It is equally important that they retain that dental fitness after they are discharged from service.

After the dental officer had completed the necessary dental operations on George Miller, he told the young GI, "Now remember, boy, stay as dentally fit as you are."

George was more than willing to take the dentist's advice. He reported for dental inspection as frequently as possible during his years in the Army, and he intends to keep up this practice.

"Stay as dentally fit as you are!" That is a good slogan for all our returning servicemen and women.

It is the hope of organized dentistry that soldiers and sailors will

THE STORY THAT HAS BEEN NEARLY 100 YEARS IN COMING . . . . .

MAN against PAIN

By HOWARD RILEY RAPER

● Here, at last, is the complete story of anesthesia,—"In its plot twists and unending surprises, in its insight into men and mankind, it carries the reader with an increasing excitement the greatest of fiction writers scarcely surpass." —*Pageant*. A Scientific Book Club Selection. Illustrated with photographs.

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POOR MAN'S DOCTOR

By LEWIS R. TRYON, M. D.

This "narrative is distinctly off-the-trail and it achieves a special joyousness not to be found in a dozen of its nearest competitors!"—*Boston Herald*

$2.75

not turn in their service acquired dental hygienic habits along with their guns and battleships. Dentistry is proud of a job well done, but its main concern is to safeguard the work accomplished by the Army and Navy Dental Corps.

Industry can profit greatly from the Army and Navy's program of dental rehabilitation. Efficiency in the performance of duties—whether in industry or in military service—depends on physical fitness. Physical fitness necessarily includes the elimination of dental infection, satisfactory oral hygiene and adequate dental care.

NEW BOOKS

The Book of Knowledge—Annual 1945

Edited by E. V. McLoughlin. Grolier Society.

For years the Book of Knowledge has been a mainstay of the child's literary diet. The Annual for 1945 offers a review of world accomplishments, magnificently illustrated and written particularly for the growing child's point of view. Especially valuable are the sections of the book dealing with careers. From the point of view of health, attention is called especially to the fine article on food resources of the world, the article on medicine by the editor of HYGEIA, the ones on chemistry and physics, and on science as a career.

Dietary of Health and Disease

By Gertrude I. Thomas. Cloth. Price, $3.50. Pp. 308. Philadelphia: Lea and Febiger, 1945.

The author has aimed to summarize briefly the most recent theories regarding nutrition and their application to the diet. She has recognized the increasing interest in the close relationship of psychologic factors to eating. Rarely is a chapter such as "Society and Nutrition," or a discussion such as appetite vs. hunger, or the relationship between food habits and nutrition, included in a book of this sort. Miss Thomas is to be commended for her attention to the psychologic factor in nutrition.

The recipes in the book are based on the fundamental principles of nutrition as set forth in the first part of the volume. Recipes are attractive, offer variety and are scored with the family income and wartime food rationing in mind. A complete schedule of dietary management is presented for all normal phases of life and for almost every type of disease the physician meets in his everyday practice. Diets are therapeutic in nature, arranged to combat the results of nutritional deficiency as manifested by pellagra, scurvy, rickets, beri-beri, diabetes and many other maladies. This book is an important contribution to the science of nutrition. It should meet the demands of both patients and physicians. HERBERT T. KELLY, M.D.

Claudia's cousin is a trained nurse

JUDY: Can't you get someone else in my place tomorrow night, Claudia? ...It's the usual reason—wrong time-of-month.

CLAUDIA: *Why don't you use Tampax for a change? It's worn internally, you know—so small and dainty you can't even feel it.*

JUDY: I've heard about Tampax, of course—but I'm glad to have someone really explain it to me.

CLAUDIA: *Well, my cousin is a trained nurse—knows all about sanitary protection of course, and she's awfully strong for Tampax... says a doctor invented it, following a principle well known to physicians—"internal absorption" she called it.*

JUDY: I suppose that means no belts or pins to bother with. Sounds nice and simple with a sheer evening dress! Perhaps you'll see me at your party after all!

* * *

Tampax (for monthly sanitary protection) is *worn* internally and *absorbs* internally. Made of pure surgical cotton compressed in dainty applicators. No belts, pins or external pads. No external odor or chafing. Easy disposal. Can be worn in tub or shower...Sold in 3 absorbency-sizes at drug stores and notion counters. Whole month's supply (average) will go into your purse. Tampax Incorporated, Palmer, Massachusetts.

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Carlson Mfg. Co.
4400 Broadway, Oakland, Calif.

Health Teaching

(Continued from page 919)

whole and the functioning of its parts.

Learn to brush teeth and gums in an approved manner.

Learn to keep the hands from the face and avoid squeezing or picking at pimples.

Learn to select healthful clothing when buying for himself.

Learn to like all foods necessary for health and growth, including milk and dairy products, vegetables, fruits, whole grain or enriched cereals and breads, meats, fish, poultry and eggs.

Learn table etiquet.

Realize that a majority of accidents can be prevented.

Learn good sportsmanship in all phases of school and home life as well as in physical and recreational activities.

Experience a school environment in which teachers are physically healthy, secure and free from fears, worries, anxieties, apprehensions and depressions and where early deviation from normal behavior is recognized and its underlying cause sought.

Even this short list of specific objectives of health education is wearying. The whole list would further serve to emphasize the magnitude of the problems which are being left to George and Harvey. They are not going to be solved by magic; no white rabbits are going to jump out of hats with a fully health-conscious youngster under each arm. Remember that there are 27,000,000 individually different children in the school population on whom these hundreds of specific health objectives must be impressed. The magnitude of the problems, as well as their diversity, should suggest that there is no one answer or set of answers. Uncle Sam cannot provide the whole solution—or even a major part of it—any more than George and Harvey can. The Illinois plan for health education enunciates a basic truth when, in recommending the organization of community, school system and individual school health councils and committees, it states:

"The school health program for each school and the health education program in each community must be developed locally. Effective programs and curricula are best prepared at the local level, with the participation of the health personnel and teachers concerned. The school health program is an important element in a community-wide program of health education. It presupposes the cooperation of local official and voluntary health agencies."

Sources of Program Material for a School Health Council

A Basic Plan for Health Education and the School Health Program, issued jointly by Vernon L. Nickell, Superintendent, Office of Public Instruction; Roland R. Cross, M.D., Director, Department of Public Health; Frank G. Thompson, Director, Department of Registration and Education. State of Illinois: Springfield (Ill.), 1944

Health Education: A Guide for Teachers in Elementary and Secondary Schools and Institutions for Teacher Education, by Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. 3rd edition (revised), $1.50: Washington, D. C., 1941. Write to NEA at 1201 16th St., N.W., Washington, D. C. Write to the AMA, Bureau of Health Education, at 535 N. Dearborn St., Chicago 10, Ill.

Ways to Community Health Education by Ira V. Hiscock and collaborators: Commonwealth Fund (41 E. 57th St.), $3. New York, N. Y.; 1939

Institute in Health Education for School Administrators: Mimeographed. Center for Continuation Study, University of Minnesota, Minneapolis, Minn.

American Journal of School Health, published by the American School Health Association, 3335 Main St., Buffalo, N. Y.

The Journal of Health and Physical Education, published by the American Association for Health, Physical Education and Recreation, 1201 16th St., N.W., Washington, D. C.

Health Bulletin for Teachers published by School Health Bureau, Metropolitan Life Insurance Co., 1 Madison Ave., New York, N. Y.

Experience in many, though by no means enough, communities and schools has now demonstrated that the health council is the most effective way of getting a handhold on the slippery but necessary problem of universal health education. The individual doctor with his private or ward patient is undoubtedly the single best health educator, but the medical profession would be the first to say (as the American Medical Association's long-established Bureau of Health Education and the American Public Health Association's special sections on Public Health Education and School Health amply testify) that preventive medicine is not something that can be practiced by the doctor alone. Cooperation of the civic or school community is as essential as medical guidance in raising health standards.

The school health council, even 275,000 school health councils, the maximum potential, cannot do the

job alone. There is need for more community health councils. There is need for more industrial health councils to help safeguard the health of 40,000,000 people gainfully employed in industry. But the school health council, with the authority of organized medicine and organized education behind it, has the largest and potentially most important task ahead. Not only does it touch the huge school population but through them it reaches an additional 20,000,000 parents. The small, one-room rural school has a most important function in this program, because it is a logical focal point for bringing health education to the 10,000,000 adults who live on farms throughout the United States.

Educational leaders have spoken many brave words about the important place that health education ought to occupy in the program of general education:

"To discharge the duties of life and to benefit from leisure, one must have good health. The health of the individual is essential also to the vitality of the race and to the defense of the nation. Health education is, therefore, fundamental.

"Health needs cannot be neglected during the period of secondary education without serious danger to the individual and the race. The secondary school should therefore provide health instruction, inculcate health habits, organize an effective program of physical activities, regard health needs in planning work and play, and cooperate with home and community in safeguarding and promoting health interests."

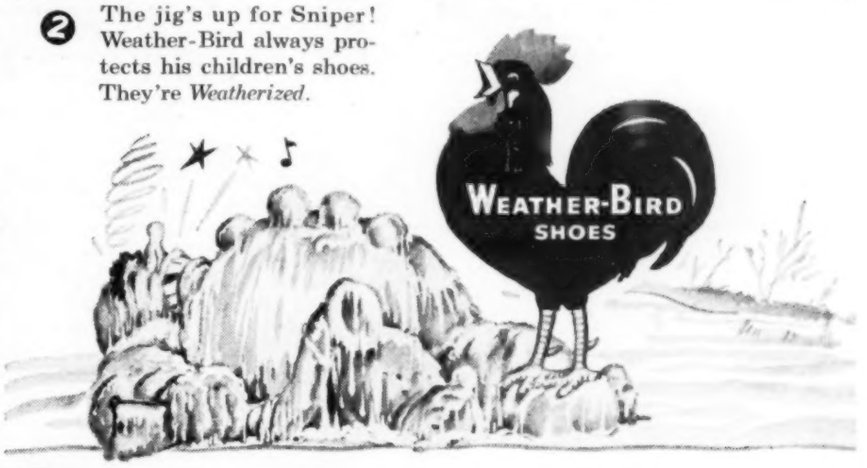
Brave words! They are included in a report of the Commission on the Reorganization of Secondary Education appointed by the National Education Association and published under the title, "Cardinal Principles of Secondary Education." When? In 1918!

As indicated by an analysis of the cause for rejection for military service under the terms of selective service examinations, as well as by such specific finger pointing as the Strayer Survey in Boston, these cardinal principles had faded to a pretty pale pink in the minds of many school administrators during the quarter century between the first and second world wars. On the hopeful side, better technics for solving the problems of health education have been worked out in this same period. The best of these is the health council, with the everlasting watchword: cooperation.

Any one can start a health council, and there are about 250,000 people in official positions in school systems who ought to! Simply get on the telephone and invite a dozen people in key positions to an organization meeting in your office or in your home. There is enough material in this brief presentation to make up an agenda for the first meeting.

1 Sniper Snow's gunning for children's shoes ... out to make them bleach, crack and creak. But, Weather-Bird's wise to him!

2 The jig's up for Sniper! Weather-Bird always protects his children's shoes. They're *Weatherized*.



3 "It Takes Leather to Stand Weather." To get special fitting qualities—and reinforcements in vital parts, insist on the Weather-Bird trade-mark.

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1. **Water Repellent Outsoles** — of leather or rubber.
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HEALTH IN THE HEADLINES

A NEW method for diagnosing and studying conditions of the blood vessels in the limbs was recently reported by two New York doctors in the *Archives of Internal Medicine*. Fluorescein, a fluorescent dye, is injected into the veins of the patient, and a beam of long wave ultraviolet radiation is directed on the area to be studied. Under the ultraviolet ray, the small blood vessels of the skin and the mucous membranes will fluoresce as the dye reaches them. The degree of fluorescence depends on the amount of blood which is flowing in the part of the body observed—say, for example, the right

leg. If the patient's foot and leg are cold and pale, symptoms which characteristically indicate the plugging of an artery or vein by a blood clot or other obstruction, the doctor can tell how much the circulation has diminished by the varying intensity of the greenish golden staining. If there is a sharp line of demarkation between fluorescent and nonfluorescent vessels, he knows that circulation has stopped at a certain point and, furthermore, he knows exactly where that point is. If, on the other hand, the vessels throughout the whole leg and foot fluoresce, the doctor knows that circulation has not been completely inhibited even though it may have decreased in an easily visible area. Use of this rather eerie procedure can help the doctor treat many of the serious vascular diseases, including that scourge of old age, hardening of the arteries.

* * *

RECENTLY in England the National Anti-Vivisection Society claimed exemption from income tax, giving as its reason that it was a body established for charitable purposes only. The presiding justice in the case thought otherwise. His reasoning apparently went something like this: Charity is defined as anything given for the relief of the needy, and the public indubitably needs relief from sickness. The avowed object of the N.A.V.S. is the abolition of vivisection. It has been proved that discontinuance of animal experimentation would hinder scientists from obtaining knowledge for the control and banishment of disease. In effect, then, the society's expressed desire is to stand in the way of progress toward the distinctly charitable goal of universal good health. The National Anti-Vivisection Society continues to pay its income tax.

* * *

OF 729 policyholders killed last year in home accidents, the Metropolitan Life Insurance Company has discovered that one-fourth died as a result of injuries received in the bedroom. Asphyxiation, burns and falls, in that order, were fatal to people who, in darkness and after long hours of the unconsciousness of sleep, were particularly vulnerable to danger. Twenty per cent of the 388 women in the group, compared to 10 per cent of the 341 men, came to grief by way of the kitchen—a fact which probably won't surprise any housewife. Burns, understandably, were most prominent as a cause of death in the kitchen, and falls and gas poisoning figured in the statistics for women, as well. The greatest danger the kitchen had for men was death by gas poisoning. Stairs and steps present a special risk "from the nature of things," Metropolitan's statisticians remark sagely, and they seem to be justified when their figures show that those stairs and steps caused about one fifth of the casualties among both men and women. Living room and bathroom followed the stairways in importance as fatal accident spots.

* * *

FOR their great devotion to duty during the war years, 964 Army and Navy Nurses have received awards and citations. In the Army Nurse Corps, the decorations include one distinguished service medal, 2 distinguished flying crosses (one of which was posthumous), 4 silver stars, 12 legion of merit, 5 soldiers medals, 332 bronze stars, 354 air medals, 103 citations and 60 purple hearts, 15 of the latter posthumously awarded. The Navy Nurses can exhibit 1 legion of merit, 13 bronze star medals, 12 presidential unit citations, 42 unit citations, and 12 individual commendations. The *American Journal of Nursing*, which published these figures, also announces that 76,003 nurses, 31.3 per cent of all active professional nurses, have served with the armed forces. This constitutes a larger number of war-service volunteers from nursing than from any other American profession.

* * *

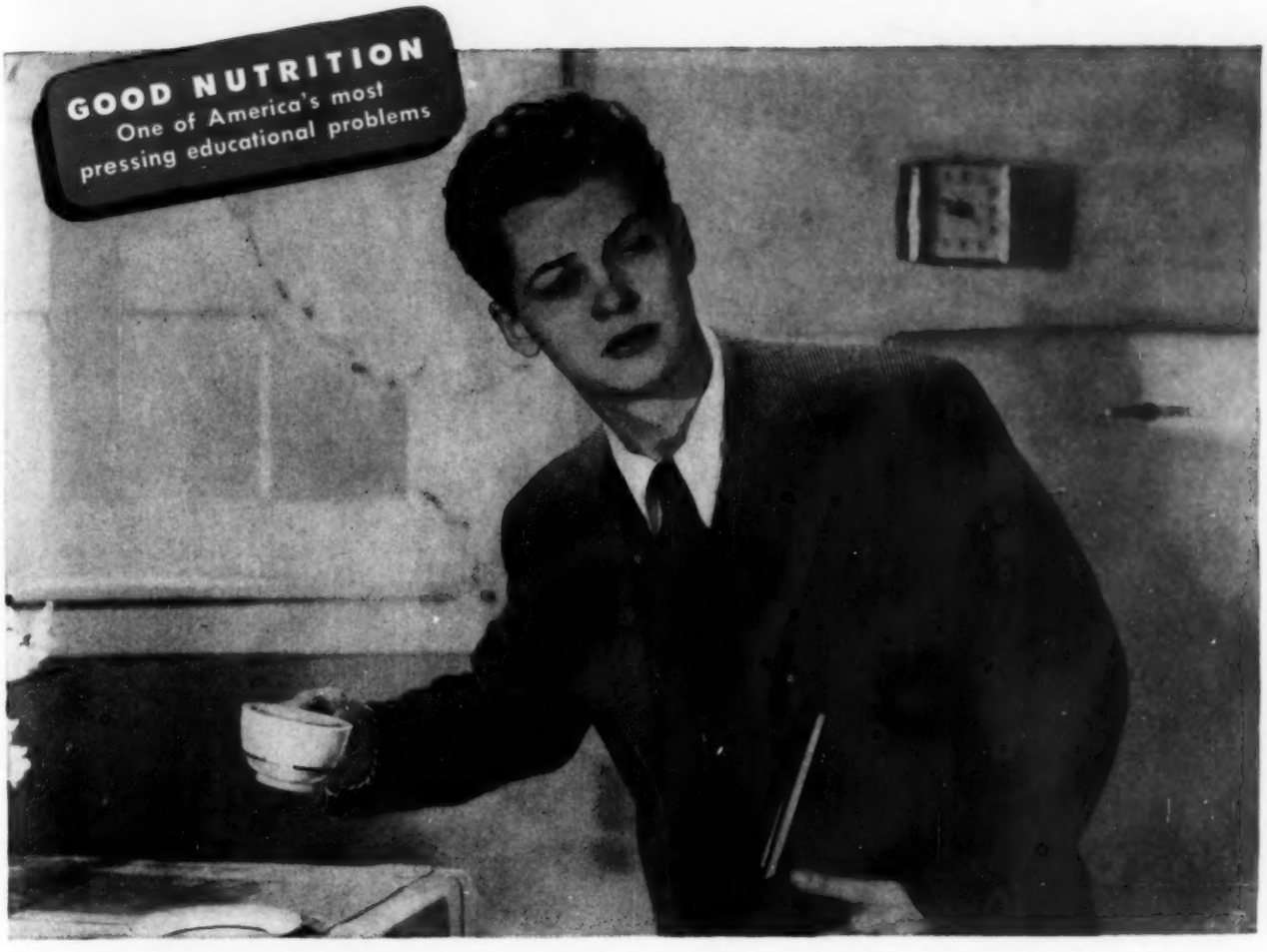
APPARENTLY the notoriously bad British teeth are undergoing some improvement, due in part, at least, to the exigencies of war. The *British Medical Journal* recently reported the results of two large scale dental surveys, the first made in 1929 and the second during the war, of 5 year old children in the same or comparable London schools. The contrast between what the two surveys show is remarkably encouraging to Britain's health authorities. In 1929, 8 per cent of the children had perfect or nearly perfect dental structure, compared to 19 per cent in the war years. Only 5 per cent of the 1929 5-year-olds had no tooth decay, whereas 22 per cent of the recently examined children were "caries free." It is generally thought that the marked improvement may be due largely to changed feeding habits. In 1934 the Milk Marketing Board made cheap milk easily available to mothers and children. Later, the wartime food policy included increased allowances of milk, cod liver oil and fruit juices to pregnant and nursing mothers, infants and young children, beside providing for the enrichment of oleomargarine with vitamins A and D and the addition of calcium carbonate to bread. Though the dental condition of London's children is still by no means the best possible (between 56 and 95 per cent of children in individual schools examined still have partial decay), things are definitely looking up.

* * *

PARENTS who have been alarmed about possible disastrous personality effects as they watch their children playing junior commando and trying out the latest ranger tactics, can stop worrying. According to a report in *Child Development*, war play is a normal reaction to environment and, far from having a bad influence on the child's social and emotional development, may even contribute to the growth of desirable personality characteristics. Children in Honolulu kindergarten and preschool groups were studied by the authors of the article, who observed

the children and their play directly and analyzed the children's paintings and their teachers' responses to questionnaires. Their conclusion was that there is no justifiable reason for suppressing war play. Now that the war is over, the kids will probably go back to cops-and-robbers — or, responding more directly to their environment, they may devise a game called pickets-and-strike-breakers.

—KATHLEEN SIMMONS.



"BREAKFAST? SKIP IT!"

Preliminary reports from new survey point immediate need for nutritional education among high school and grade school students

Below-par breakfasts . . . poor breakfasts . . . no breakfasts at all! That is the record of eating habits among students as revealed by preliminary figures from a recent week-long survey in 9 elementary and high schools in 9 Midwest rural, suburban and urban communities.

47.2% of the high school breakfasts and 23.9% of the grade school breakfasts were poor or inadequate.

43.5% of the high school breakfasts and 50.2% of the grade school breakfasts were fair (needed improvement, better selection).

Only 9.3% of the high school breakfasts and only 25.9% of the grade school breakfasts were good or adequate.

Here at General Mills we are working to develop helpful materials for teaching good nutrition to school children. These materials, based on the latest authoritative information and perfected with the help of a committee of educators, are now being tested with the cooperation of selected rural, suburban and city schools.

The results of our tests will be reported to you on these pages in the months to come. We invite your comments and suggestions.

General Mills, Inc.

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GREEN AND YELLOW VEGETABLES . . . some raw, some cooked, frozen or canned. At least one serving a day.

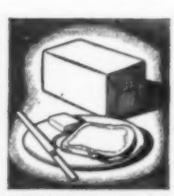
ORANGES, TOMATOES, GRAPEFRUIT . . . or raw cabbage or salad greens. At least one serving a day.

POTATOES AND OTHER VEGETABLE AND FRUITS . . . raw, dried, cooked, frozen or canned. Two or more servings a day.

MILK AND MILK PRODUCTS . . . fluid, evaporated or dried milk. One quart (or its equivalent) a day for children and expectant or nursing mothers; one pint a day for all others.

MEAT, POULTRY, FISH OR EGGS . . . or dried beans, peas, nuts or peanut butter. One serving of meat, poultry or fish a day, occasionally peas or beans instead. Three or four eggs each week.

BREAD, FLOUR, CEREALS . . . natural whole-grain or enriched or restored. Three or more servings a day.



BUTTER AND FORTIFIED MARGARINE . . . use for spreads and for seasoning as you like and as supplies permit.

In addition, **all growing children and all expectant or nursing mothers should be provided with 400 units a day of Vitamin D in the form of Vitamin D milk (fresh or evaporated), fish liver oil or Vitamin D concentrate**

for Their Protection

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IT is dangerous to neglect wounds, however small; even scratches and small cuts may cause serious infections if they are not properly treated.

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The 2% aqueous solution in applicator bottles does not sting and can be applied safely to small wounds. Children do not hesitate to report their injuries promptly when Mercurochrome is the household antiseptic, because they know that they will not be hurt. Other advantages are that solutions keep indefinitely and the color shows just where it has been applied.

Doctors have used Mercurochrome in their practice for more than 24 years.

Keep a bottle of Mercurochrome handy for the first aid care of all minor wounds. Do not fail to call a physician in more serious cases.

This seal denotes acceptance of Mercurochrome for New and Non-official Remedies by the Council on Pharmacy and Chemistry of the American Medical Association.

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